

AD-A047 860

ADVANCED AIRCRAFT ELECTRICAL SYSTEM (AAES) DEFINITION  
AND PROTOTYPE DESIG. (U) GRUMMAN AEROSPACE CORP  
BETHPAGE N Y G COTTER ET AL. JUL 76

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## ADVANCED AIRCRAFT ELECTRICAL SYSTEM (AAES)

Definition and Prototype  
Design for F-14 Aircraft

### Volume 2: Appendixes

Grumman Aerospace Corporation  
Bethpage, New York

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20. ABSTRACT (Continue on reverse side if necessary and identify by block number) <p>This report describes the application of advanced electrical power generation and distribution concepts to the F-14A aircraft. The study is designed to provide a baseline from which the concepts of the Advanced Aircraft Electrical Systems (AAES) can be developed and tested in the laboratory and on a prototype aircraft. The Navy F-14A aircraft was used as the vehicle to which the study concept was applied, and from which the study data base was developed.</p>		

Two advanced power generation concepts, Variable Speed Constant Frequency (VSCF), and Constant Frequency Generator-DC Link (CFG-DC) were investigated. The Solid State Electric Logic (SOSTEL) system was used to provide power distribution. This system employs data bus/remote terminal concepts, solid state transducers, and solid state power controllers to provide the control, protection and power interlocks presently implemented on the aircraft by electromechanical devices (switches, circuit breakers and relays).

This preliminary design study identifies the system, hardware/software operational, installation, thermal, reliability, and flight test requirements for the application of AAES to a prototype aircraft.

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## FOREWORD

Data tabulated during the analysis of F-14A Integrated Weapons Systems Functional Diagrams (IWSFD) NAVAIR No. 01-F-14AAA-16 and No. 01-F-14AAA-16A is documented in Appendix B. Tables A-1 and A-2 of Appendix A provide a serial-numerical correlation of the identification codes of the transducers and equations with the IWSFD figure. Table A-3 is a listing of the number of equations and transducers by IWSFD figure. Table A-4 serially identifies the transducers by identification codes, name, signal source and IWSFD figure number. Appendix C records Bendix Corporation comments on specification MIL-E-23001A(AS) in order of specification paragraph number.

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Appendix A  
CORRELATION DATA

TABLE A-1. TRANSDUCER AND ASSOCIATED F-14 INTEGRATED WEAPON SYSTEMS  
FUNCTIONAL DIAGRAMS (IWSFD) INDEX

Transducer Ident Code	IWSFD Figure	Transducer Ident Code	IWSFD Figure
001-002	1	163	35
003-005	2	164-179	42
006-007	3	180-187	35
008-011	8	188-190	42
012-015	9	191-215	30
016	11	216-250	1
017	5	251-253	17
018-019	12	254-256	18
020	14	257-260	19
021-025	1	261-275	20
026-030	2	276	27
031-033	1	277	43
034-047	2	278	15
048-058	3	279-280	19
059-070	5	281	20
071-072	2	282-288	10
073	3	289-499	OPEN
074-075	7	500-508	45
076-082	16	509-517	29
083-093	44	518-541	46
094-100	33	542	OPEN
101	34	543-549	46
102	1	550-578	43
103-104	34	579-581	46
105-108	37	582-699	OPEN
109	38	700-708	1A
110-123	39	709-718	3A
124-130	32	719	4A
131-136	40	720	5A
137-153	32	721-724	4A
154-156	40	725	OPEN
157-158	38	726-727	4A
159-162	40	728-729	5A



TABLE A-2. EQUATION/CONTROLLER AND ASSOCIATED F-14 INTEGRATED WEAPON SYSTEMS FUNCTIONAL DIAGRAMS (IWSFD) INDEX

Equation/ Controller Ident Code	IWSFD Figure	Equation/ Controller Ident Code	IWSFD Figure	Equation/ Controller Ident Code	IWSFD Figure
001-017	1	112-116	5	375-376	27
018-025	2	117-119	2	377-378	15
026	3	120-123	3	379-380	19
027-030	4	124-125	7	381-382	10
031	5	126-157	16	383-396	20
032-036	6	158-167	44	397	17
037-040	7	168-174	33	398-401	10
041-055	8	175-179	34	402-403	15
056-059	9	180-181	37	404-499	OPEN
060-061	10	182-192	38	500-504	41
062	11	193-194	39	505-516	45
063-064	12	195-206	32	517-528	29
065-066	13	207-209	3	529-532	46
067-076	14	210-223	32	533-534	15
077	OPEN	224-235	40	535-536	46
078-081	15	236-261	42	537-538	10
082-084	OPEN	262-276	35	539-558	46
085	15	277	42	559-592	43
086-094	1	278-299	30	593-699	OPEN
095-098	2	300-321	1	700-715	1A
099-101	1	322-331	17	716-726	3A
102-106	2	332-337	18	727-740	4A
107-110	3	338-347	19	741-751	5A
111	6	348-374	20		

TABLE A-3. NUMBER OF EQUATIONS AND TRANSDUCERS BY FIGURE  
(SHEET 1 OF 2)

Figure	No. of Equations	No. of Transducers
1	51	47
2	20	24
3	12	14
4	4	0
5	6	13
6	6	0
7	6	2
8	15	4
9	4	4
10	9	7
11	1	1
12	2	2
13	2	0
14	10	1
15	11	1
16	32	7
17	11	3
18	6	3
19	12	6
20	42	16
27	2	1
29	12	9
30	22	25
32	26	24
33	7	7
34	5	3
35	15	9
37	2	4
38	11	3
39	2	14
40	12	13
41	5	0

TABLE A-3. NUMBER OF EQUATIONS AND TRANSDUCERS BY FIGURE  
(SHEET 2 OF 2)

Figure	No. of Equations	No. of Transducers
42	27	19
43	34	30
44	10	11
45	12	9
46	26	34
1A	16	9
3A	11	10
4A	14	7
5A	11	3

TABLE A-4. TRANSDUCERS (SHEET 1 OF 13)

ITEM	SIGNAL NAME/FUNCTION	SIGNAL SOURCE	IDENT	FIG	NOTE
001	> 62° WING SWEEP	WING POS. SW (51AS)	CRS001	1	0.1 CFS
002	LEFT MLG WING	LEFT MLG SAFETY SWITCH (45SL)	CRS002	1	1 CFF
003	RGT MAIN AC PWR ON LINE	AC PWR CONTACTORS (66AG)	XAS003	2	1 CFF
004	LFT MAIN AC PWR ON LINE	AC PWR CONTACTORS (66AG)	XAS004	2	1 CFF
005	GND COOLING PRESS INTLK - HIGH	GND COOLING PRESS INTLK SW (55S2)	HNS005	2	1 CFF
006	ENG/PROBES ANTI-ICE SW-ORIDE	EXT. ENVIR CONTROL PNL (792A1)	HAS006	3	2 CFF
007	ENG/PROBES ANTI-ICE ST-AUTO	EXT. ENVIR CONTROL PNL (792A1)	HAS007	3	2 CFF
008	CRYPTO - ON	KY-28 CONTROL PNL (12A2)	RF008	8	2 CFF
009	CRYPTO - RELAY	KY-28 CONTROL PNL (12A2)	RF009	8	2 CFF
010	CRYPTO - PLAIN	KY-28 CONTROL PNL (12A2)	RF010	-8	2 CFF
011	CRYPTO - ZEROIZE	KY-28 CONTROL PNL (12A2)	RF011	8	2 CFF
012	IFF ENA	AN/ANG 9	L-3012	9	1 CFS
013	PILOT EJECT - NORMAL	PILOT EJECT SW (09S2)	MI-3013	9	1 CFF
014	MODE 4 CODE ZEROIZE	IFF TRANSPONDER	SKS014	9	1 CFS
015	R-AUCS HYDR-ON	RIGHT AIR INLET CONTROL PROGRAMMER (32A7)	DHS015	46	0.1 CFS
016	HSD/BMD - ON	DISPLAYS CONTROL PANEL (709A1)	TES016	11	2 CFF
017	THROTTLE MODE SW - BOOST/AUTO	PILOTS LEFT SIDE CONSOLE	QS017	5	4 CFF
018	VDI - ON	DISPLAYS CONTROL PANEL (709A1)	FS018	12	2 CFF
019	HID - ON	DISPLAYS CONTROL PANEL (709A1)	FS019	12	2 CFF
020	GYRO/NGHLD HT - ON	SYS TEST - SYS PWR PANEL (790A1)	HNS020	14	4 CFF
021	RUDDER TRIM SW - LEFT	INLET RAMPS/ENG CRANK/THROTTLE CONTROL PNL (710A1)	CJS021	1	4 CFF
022	RUDDER TRIM SW - RIGHT	INLET RAMPS/ENG CRANK/THROTTLE CONTROL PNL (710A1)	CJS022	1	4 CFF
023	TRIM SW - UP	CONTROL STICK (20A4) HAND GRIP (20A42) TRANSDUCER ASSY (20A4A1)	CPS023	1	4 CFF
024	TRIM SW - DOWN	CONTROL STICK (20A4) HAND GRIP (20A42) TRANSDUCER ASSY (20A4A1)	CPS024	1	4 CFF
025	ATTITUDE HOLD SELECTED	APCS CONTROL PANEL (20A9)	CPS025	1	10 CFF
026	HORIZONTAL TAIL AUTHORITY STOP SW - OPEN	HORIZ TAIL AUTHORITY STOP SW (5031)	CPS026	2	10 CFF
027	WING SWEEP HANDLE POS. SW - RAISED 2.5 INCHES	THROTTLE QUADRANT (711A1)	CPS027	2	0.1 CFS
028	HORIZ TAIL RESTRICTED AUTHORITY SW - RESTRICTED	HORIZ TAIL RESTRICTED AUTHORITY SW (5032)	CPS028	2	0.1 CFS
029	AFT STICK AUTHORITY SW - REDUCED AUTHORITY	AFT STICK AUTHORITY SW (5033)	CPS029	2	0.1 CFS
030	WING SWEEP HANDLE POS. SW - < 64°	THROTTLE QUADRANT (711A1)	CKS030	2	0.1 CFS
031	COMBINED HYD PRESS SW - NORMAL	COMB HYD PRESS SW (63S1)	DHS031	1, 35	1 CFF
032	FLT HYD PRESS SW - NORMAL	FLT HYD PRESS SW (63S2)	DHS032	1, 35	1 CFF
033	AUTO PILOT ENGAGE NOSE/HEEL STEERING ENGAGE	CONTROL STICK (20A4) HAND GRIP (20A42)	GHS033	1	1 CFF
034	LFT AUX FLAP RETRACT SW - RETRACT	P/O LEFT AUX FLAP RETRACT SW (51S17)	CKS034	2	0.1 CFS

TABLE A-4. TRANSDUCERS (SHEET 2 OF 13)

ITEM	SIGNAL NAME/FUNCTION	SIGNAL SOURCE	IDENT	FIG	NOTE
035	RIGHT AUX FLAP RETRACT SW - RETRACT	P/O RIGHT AUX FLAP RETRACT SW (51S18)	CK5035	2	0.1 CFS
036	FLAP HANDLE - < 6°	FLAP 6° SWITCH (51S19)	CK5036	2	0.1 CFS
037	LEFT SLAT ASYMMETRY SW - CLOSED	LEFT SLAT ASYMMETRY SW (51S7)	CK5037	2	0.1 CFS
038	RIGHT SLAT ASYMMETRY SW - CLOSED	RIGHT SLAT ASYMMETRY SW (51S8)	CK5038	2	0.1 CFS
039	LEFT FLAP ASYMMETRY SW - CLOSED	LEFT FLAP ASYMMETRY SW (51S5)	CK5039	2	0.1 CFS
040	RIGHT FLAP ASYMMETRY SW - CLOSED	RIGHT FLAP ASYMMETRY SW (51S6)	CK5040	2	0.1 CFS
041	RIGHT FLAP OVERTRAVEL UP SW - CLOSED	RIGHT FLAP OVERTRAVEL UP SW (51S13)	CK5041	2	0.1 CFS
042	RIGHT FLAP OVERTRAVEL DOWN SW - CLOSED	RIGHT FLAP OVERTRAVEL DOWN SW (51S14)	CK5042	2	0.1 CFS
043	LEFT FLAP OVERTRAVEL UP SW - CLOSED	LEFT FLAP OVERTRAVEL UP SW (51S15)	CK5043	2	0.1 CFS
044	LEFT FLAP OVERTRAVEL DOWN SW - CLOSED	LEFT FLAP OVERTRAVEL DOWN SW (51S16)	CK5044	2	0.1 CFS
045	WING SWEEP SW - 20°	P/O WING SWEEP SW (51A5)	CK5045	2	0.1 CFS
046	FLAP HANDLE - 70°	FLAP HANDLE P/C SW. (P/O THROTTLE QUAD 711A1)	CK5046	2	0.1 CFS
047	FLAP INTLK ENGAGED	WING SWEEP/FLAP AND SLAT CONTROL BOX	CK5047	2	0.1 CFS
048	EXTERIOR LITES - OFF	THROTTLE QUADRANT (711A1)	LAS 048	3	4 CFF
049	HOOK CONTROL HANDLE - DOWN	HOOK/GUN PANEL (706A1) HOOK CONTROL HANDLE (49A1)	QZ5049	3	1 CFF
050	HOOK BYPASS - CARRIER	MASTER LITE CONTROL PANEL (713A1)	QZ5050	3	1 CFF
051	ARRESTING HOOK - DOWN	HOOK DOWN SWITCH (49S2)	QZ5051	3	1 CFF
052	MLG HANDLE - DOWN	MLG HANDLE (765A1)	QZ5052	3	2 CFF
053	HIGH APPROACH	ATTN INDICATOR (45A2)	LAS053	3	10 CFF
054	DOOR SWITCH - OPEN	SYS TEST - SYS FWR PNL (790A1)	WAS054	3	1 CFF
055	TEST-DEPRESSED	SYS TEST - SYS FWR PNL (790A1)	WAS055	3	10 CFF
056	ATTN - SELECTED	SYS TEST - SYS FWR PNL (790A1)	LAS056	3	1 CFF
057	LOW APPROACH	ATTN INDICATOR (45A2)	LAS057	3	10 CFF
058	NORMAL APPROACH	ATTN INDICATOR (45A2)	LAS058	3	10 CFF
059	AUTO INITIATE	THROTTLE CONTROL COMPUTER (21A1)	QK5059	5	0.1 CFS
060	NO FRICTION	P/O THROTTLE QUADRANT (711A1)	QK5060	5	0.1 CFS
061	R. THROTTLE LEVER - 8 LES	P/O THROTTLE QUADRANT (711A1)	QK5061	5	0.1 CFS
062	L. THROTTLE LEVER - 8 LES	P/O THROTTLE QUADRANT (711A1)	QK5062	5	0.1 CFS
063	6° < MIL LEFT	P/O LEFT THROTTLE CONTROL ACTUATOR (21A7)	QK5063	5	0.1 CFS



TABLE A-4. TRANSDUCERS (SHEET 3 OF 13)

ITEM	SIGNAL NAME/FUNCTION	SIGNAL SOURCE	IDENT	FIG	NOTE
064	6° > IDLE LEFT	P/O LEFT THROTTLE CONTROL ACTUATOR (21A7)	QKSO64	5	0.1 CFS
065	6° > IDLE RIGHT	P/O RIGHT THROTTLE CONTROL ACTUATOR (21A7)	QKSO65	5	0.1 CFS
066	6° < MIL RIGHT	P/O RIGHT THROTTLE CONTROL ACTUATOR (21A7)	QKSO66	5	0.1 CFS
067	FLT GEAR DN	MASTER TEST PANEL (73A41)	MUS067	5	1 CFF
068	TEST SELECTOR - DEPRESSED	MASTER TEST PANEL (73A41)	MUS068	5	10 CFF
069	LEFT TORQUE LIMIT NOT	P/O LEFT THROTTLE CONTROL ACTUATOR (21A7)	QKSO69	5	0.1 CFS
070	RIGHT TORQUE LIMIT NOT	P/O RIGHT THROTTLE CONTROL ACTUATOR (21A7)	QKSO70	5	0.1 CFS
071	WING SWEEP	SYS TEST - SYS IWR PANEL (790A1)	CKSO71	2	1 CFF
072	FLAP INTERLOCK DISENGAGED	WING SWEEP/FLAP AND SLAT CONTROL BOX (50A2)	CKSO72	2	0.1 CFS
073	LTS	MASTER TEST PANEL (73A41)	LAS073	3	1 CFF
074	RADAR BEACON - OFF	RADAR BEACON CONTROL PANEL (19A2)	TFS074	7	4 CFF
075	ACLS SELECTED	RADAR BEACON CONTROL PANEL (19A2)	TFS075	7	4 CFF
076	MCB ENABLE	ARMAMENT PANEL (89A1)	KCS076	16	20 CFF
077	EMERG STORES JETT	EMERG STORES JETT PUSHBUTTON (85S2)	AKS077	16	1 CFF
078	ACM - ON	ACM PANEL (702A1)	AKS078	16	10 CFF
079	FUSE ENABLE INTLK (25VDC)	ARMAMENT PANEL (89A1)	AKS079	16	0.1 CFS
080	ARMAMENT SAFETY ORIDE SWITCH - ENABLED	ARMAMENT SAFETY OVERRIDE SWITCH (85S3)	AKS080	16	1 CFF
081	ACM JETT	ACM JETT PUSHBUTTON SWITCH (ACM PANEL 702A1)	AKS081	16	1 CFF
082	MASTER ARM - ON	ACM PANEL (702A1)	AKS082	16	1 CFF
083	PROBE OUT/LOCKED SWITCH - LOCKED	P/O PROBE HARNESS SWITCHES (62S1)	QFS083	44	10 CFF
084	TAXI LITES - ON	MASTER LITE CONTROL (713A1)	LIS084	44	4 CFF
085	NLG - DOWN AND LOCKED	NLG DOWN & LOCKED SWITCH (75S3)	GIS085	44	1 CFF
086	ANTI-COLLISION LITES - ON	MASTER LITE CONTROL (713A1)	LNS086	44	1 CFF
087	MASTER LITE - STEADY	MASTER LITE CONTROL (713A1)	LNS087	44	2 CFF
088	TAIL POSITION - BRIGHT	MASTER LITE CONTROL (713A1)	LNS088	44	2 CFF
089	TAIL POSITION - DIM	MASTER LITE CONTROL (713A1)	LNS089	44	2 CFF
090	WING POSITION - BRIGHT	MASTER LITE CONTROL (713A1)	LNS090	44	2 CFF
091	WING POSITION - DIM	MASTER LITE CONTROL (713A1)	LNS091	44	2 CFF
092	WING SWEEP - > 25°	SWITCH ACTUATOR TRANSMITTER (63S3)	CKSO92	44	0.1 CFS
093	FORMATION LITES - ON	MASTER LITE CONTROL (713A1)	LFS093	44	2 CFF
094	GYRO/ASHED HTR - ON	SYS. TEST & SYS. IWR PNL (790A1)	MUS094	33	4 CFF
095	WINDSHIELD DEFOG - MAX	WINDSHIELD DEFOG PNL (40A3)	MUS095	33	2 CFF
096	WINDSHIELD DEFOG - NORM	WINDSHIELD DEFOG PNL (40A3)	MUS096	33	2 CFF

TABLE A-4. TRANSDUCERS (SHEET 4 OF 13)

ITEM	SIGNAL NAME/FUNCTION	SIGNAL SOURCE	IDENT	FIG	RATE
097	WHLDR OVERHEAT SENSOR - HOT	WHLDR OVERHEAT SENSOR (40S1)	HAS097	33	0.1 CFS
098	RAIN REFUEL - ON	EXT. ENVIRONMENT CONTROL PANEL (792A1)	HAS098	33	2 CFF
099	AIR - ON	EXT. ENVIRONMENT CONTROL PANEL (792A1)	HAS099	33	2 CFF
100	ALARM LITE OUTPUT - ON	WINDSHIELD POWER CONTROL (40A1)	LTS100	33	2 CFF
101	LIQ COOLING AMG9/AIM9A - ON	LIQUID COOLING CONTROL PANEL (61A1)	HNS101	34	2 CFF
102	RIGHT MEG WOV	RIGHT MEG SAFETY SWITCH (48S2)	QMS102	1	1 CFF
103	LIQ COOLING AMG-9 - ON	LIQUID COOLING CONTROL PANEL (61A1)	HNS103	34	2 CFF
104	FAIRING INTERLOCK SWITCH - CLOSED	FAIRING INTERLOCK SWITCH (61S3)	HNS104	34	2 CFF
105	PRESSURE - > 2000 ± 50 PSI	SPOILER/HIGH LIFT BACKUP MODULE (53B1)	HNS105	37	0.1 CFS
106	SPOILERS - ON	AC FWR CONTACTOR ASSEMBLY (66A3K3)	GES106	37	2 CFF
107	EXTERNAL ELEC. IWR - ON	SPOILERS - SYSTEM TEST - SYSTEM FWR PANEL (790A1)	XAS107	37	1 CFF
108	TEMP SWITCH > 275° ± 15°	SPOILER/HIGH LIFT BACKUP MODULE (53B1)	EMS108	37	0.1 CFS
109	RIGHT ENG. OIL TEMP > 250°F	RIGHT ENG. OIL TEMP. SWITCH (70A4)	EMS109	36	0.1 CFS
110	L. ENGINE MACH SWITCH ≥ 2.1 MACH	LEFT ENGINE MACH SWITCH	KCS110	39	0.1 CFS
111	L. ENGINE PLA SWITCH - IDLE	LEFT ENGINE PLA SWITCH	KCS111	39	0.1 CFS
112	L. NOT STOWED > 0.9 MACH	DIFFUSER RAMP OUT OF STOW SWITCH (32S4)	KCS112	39	10 CFF
113	L. THROTTLE < 31°	THROTTLE QUADRANT (711A1)	QMS113	39	0.1 CFS
114	L. BLEED EXIT DOOR COMMAND - ON	LEFT AIR INLET CONTROL PROGRAMMER (32AG)	KCS114	39	0.1 CFS
115	RUDER LEFT DEFLECTION - > 10°	MCB RUDER SWITCH (80S1)	CJS115	39	0.1 CFS
116	RUDER FIGHT DEFLECTION - > 10°	MCB RUDER SWITCH (80S2)	CJS116	39	0.1 CFS
117	RIGHT THROTTLE - < 31°	THROTTLE QUADRANT (711A1)	QMS117	39	0.1 CFS
118	RIGHT NOT STOWED > 0.9 MACH	DIFFUSER RAMP OUT STOW SWITCH (32S8)	KCS118	39	0.1 CFS
119	R. BLEED EXIT DOOR COMMAND -	RIGHT AIR INLET CONTROL PROGRAMMER (32A7)	KCS119	39	0.1 CFS
120	INFLIGHT REFUELING PROBE DOOR - OPEN	INFLIGHT REFUEL PROBE DOOR SWITCH (62S1)	QMS120	39	0.1 CFS
121	AOA ≥ 17 UNITS, (> 12° AOA)	AOA INDICATOR (45A2)	FES121	39	0.1 CFS
122	RIGHT ENGINE MACH SWITCH - ≥ 2.1 MACH	RIGHT ENGINE MACH SWITCH	KCS122	39	0.1 CFS
123	RIGHT ENGINE PLA SWITCH - IDLE	RIGHT ENGINE PLA SWITCH	KCS123	39	0.1 CFS
124	AIR SOURCE - RAM SELECTED	AIR CONDITION CONTROL PANEL (42A1)	HNS124	32	2 CFF
125	RAM AIR - INCR	RAM AIR S2 SWITCH F/O (42A1)	HNS125	32	2 CFF
126	RAM AIR - DECR	RAMAIR S2 SWITCH F/O (42A1)	HNS126	32	2 CFF
127	GRD CLG - GRN/CABIN	TEST PANEL (720A1)	HNS127	32	2 CFF
128	GRD CLG - AMG9/AIM9A	TEST PANEL (720A1)	HNS128	32	2 CFF



TABLE A-4. TRANSDUCERS (SHEET 5 OF 13)

ITEM	SIGNAL NAME/FUNCTION	SIGNAL SOURCE	IDENT	FIG	RATE
129	> 30000 ± 2000 FT	ANEROID ALTITUDE SWITCH - AIRCRAFT AIR TEMP. ELECTRIC CONTROL (42A5)	HNS129	32	20 CFF
130	< 0.4 MACH SIGNAL	AIR DATA COMPUTER (05A1)	FLS130	32	0.1 CFS
131	LEFT ENGINE - CRANK	ENGINE CONTROL PANEL (710A1)	KKS131	40	2 CFF
132	RIGHT ENGINE - CRANK	ENGINE CONTROL PANEL (710A1)	KKS132	40	2 CFF
133	L. ENGINE - AUTO RESTART SWITCH - CLOSED	LEFT ENGINE COMPRESSOR DISCHARGE SWITCH PSA	KKS133	40	2 CFF
134	R. ENG. AUTO RESTART SWITCH - CLOSED	RIGHT ENGINE COMPRESSOR DISCHARGE SWITCH PSA	KKS134	40	2 CFF
135	L. ENG. CUTOFF SWITCH - CLOSED	LEFT ENGINE	KKS135	40	2 CFF
136	R. ENG. CUTOFF SWITCH - CLOSED	RIGHT ENGINE	KKS136	40	2 CFF
137	AIR SOURCE - OFF	AIR CONDITION CONTROL PANEL (42A1)	HNS137	32	2 CFF
138	AIR SOURCE - L. ENGINE	AIR CONDITION CONTROL PANEL (42A1)	HNS138	32	2 CFF
139	LEFT THROTTLE START CROSS BL - < 40°	THROTTLE QUADRANT (711A1)	KAS139	32	0.1 CFS
140	RIGHT THROTTLE START CROSS BL - < 40°	THROTTLE QUADRANT (711A1)	KAS140	32	0.1 CFS
141	LEFT ENGINE BL AIR VALVE SWITCH - CUTOFF	THROTTLE QUADRANT (711A1)	KAS141	32	0.1 CFS
142	RIGHT ENGINE BL AIR VALVE SWITCH - CUTOFF	THROTTLE QUADRANT (711A1)	KAS142	32	0.1 CFS
143	AIR SOURCE - R. ENGINE	AIR CONDITION CONTROL PANEL (42A1)	HNS143	32	2 CFF
144	FLEED DUCT OVERPRESSURE - HIGH	BLEED DUCT OVERPRESSURE SWITCH (42S4)	HNS144	32	2 CFF
145	TEMP - AUTO	AIR CONDITION CONTROL PANEL (42A1)	HNS145	32	2 CFF
146	OVERTEMPERATURE - 550°F	OVERTEMPERATURE SWITCH (550°F) (42SE)	HNS146	32	2 CFF
147	OVERTEMPERATURE - 475°F	OVERTEMPERATURE SWITCH (475°F) (42SL)	HNS147	32	2 CFF
148	< 0.25 MACH SIGNAL	AIF DATA COMPUTER (05A1)	FLS148	32	0.1 CFS
149	CABIN PRESS - CUMP	AIR CONDITION CONTROL PANEL (42A1)	HPF149	32	2 CFF
150	CABIN - LOW PRESSURE	CABIN LOW PRESSURE SWITCH (42S3)	HPF150	32	2 CFF
151	LEFT ENGINE OIL - HOT	LEFT ENGINE	ENS151	32, NAVAIR-2-2-6	2 CFF
152	CAUTION LAMP DRIVE - ON	BLEED AIR LEAK DETECTOR CONTROL UNIT (70A8)	HNS152	32	2 CFF
153	BLEED AIR - SELECTED	SYS TEST & SYS FWR PANEL (790A1)	HNS153	32	2 CFF
154	AIR START - ON	EXT. ENVIRONMENT/THROTTLE CONTROL PANEL (710A1)	KKS154	40	2 CFF
155	RIGHT IGNITION SWITCH - > 3°	THROTTLE QUADRANT (711A1)	KKS155	40	0.1 CFS
156	LEFT IGNITION SWITCH - > 3°	THROTTLE QUADRANT (711A1)	KKS156	40	0.1 CFS
157	RIGHT OVSF	ENG. ROTOR OVERSPEED DETECTOR (34MGL)	EUS157	38	2 CFF
158	LEFT OVSF	ENG. ROTOR OVERSPEED DETECTOR (34MGL)	EUS158	38	2 CFF
159	R. ENG. VALVE - OPEN	R. ENG. PRESSURE REGULATOR VALVE - POSITION SWITCH	EUS159	40	2 CFF
160	L. ENG. VALVE - OPEN	L. ENG. PRESSURE REGULATOR VALVE - POSITION SWITCH	EUS160	40	2 CFF
161	R. ENG. IDLE EXHAUST NOZZLE SOLENOID SWITCH-CLOSED (IDLE)	R. ENG. FUEL PUMP	EUS161	40, NAVAIR 2-2-6	0.1 CFS
162	L. ENG. IDLE EXHAUST NOZZLE SOLENOID SWITCH-CLOSED (IDLE)	L. ENG. FUEL PUMP	EUS162	40, NAVAIR 2-2-6	0.1 CFS

TABLE A-4. TRANSDUCERS (SHEET 6 OF 13)

ITEM	SIGNAL NAME/FUNCTION	SIGNAL SOURCE	IDENT	FLG	RATE
163	COMBINED SYS. PRESSURE - > 450 PSI	COMBINED SYS PRESSURE MODULE (4742)	EP3163	35	2 CFF
164	SPEED BRAKE - RETRACTED	SPEED BRAKE SWITCH (76S1) P/O SPEED BRAKE CONTROL SYSTEM	QAS164	42	2 CFF
165	DUMP - ON	FUEL MANAGEMENT PANEL (707A1)	QAS165	42	1 CFF
166	FUEL FEED - AFT	FUEL MANAGEMENT PANEL (707A1)	QAS166	42	2 CFF
167	FUEL FEED - FWD	FUEL MANAGEMENT PANEL (707A1)	QAS167	42	2 CFF
168	FUEL CELL 2 OR 5 - DRY	ELECTRONIC CONTROL AMPLIFIER (33A1B)	EJS168	42	2 CFF
169	RIGHT FUEL PRESSURE SWITCH - CLOSED	RIGHT FUEL PRESSURE SWITCH (2S4)	EJS169	42	2 CFF
170	LEFT FUEL PRESSURE SWITCH - CLOSED	LEFT FUEL PRESSURE SWITCH (2S3)	EJS170	42	2 CFF
171	WING/EXT TRANS - OFF	WING EXTERNAL TRANSFER SWITCH 53, P/O FUEL MANAGEMENT PANEL (707A1)	QES171	42	2 CFF
172	REFUEL PROBE - FUS/EXTD	FUEL MANAGEMENT PANEL (707A1) SWITCH S4	QES172	42	2 CFF
173	REFUEL PROBE - ALL/EXTD	FUEL MANAGEMENT PANEL (707A1) SWITCH S4	QES173	42	2 CFF
174	MASTER TEST - FLT GR UP	MASTER TEST PANEL (734A1)	DUS174	42	2 CFF
175	RIGHT FUEL LOW CAUTION ADVISORY	R. ELECTRONIC CONTROL AMPLIFIER (33A2)	EJS175	42	2 CFF
176	LEFT FUEL LOW CAUTION ADVISORY	L. ELECTRONIC CONTROL AMPLIFIER (33A4)	EJS176	42	2 CFF
177	BINGO	PLOT FUEL QUANTITY INDICATOR (33M)	EJS177	42	2 CFF
178	QUANTITY SELECT - EXT	QUANTITY SELECT SWITCH S5, P/O FUEL MANAGEMENT PANEL (707A1)	EJS178	42	2 CFF
179	QUANTITY SELECT - WING	QUANTITY SELECT SWITCH S5, P/O FUEL MANAGEMENT PANEL (707A1)	EJS179	42	2 CFF
180	EXTERNAL AC POWER - ON LINE	AC EXTERNAL POWER CONTACTOR (66A6K3)	XAS180	35	1 CFF
181	FLIGHT SYSTEM PRESS - > 450 PSI	FLIGHT SYSTEM PRESSURE MODULE (47A1)	EP3181	35	2 CFF
182	TRANSFER PUMP - ON	SYSTEM TEST AND SYSTEM POWER PANEL (790A1)	QES182	35	10 CFF
183	HYD TRANSFER PUMP - NORMAL	HYDRAULIC TRANSFER PUMP PANEL (47A3)	QES183	35	10 CFF
184	BACKUP MODULE TEMP SWITCH - CLOSED (< 180°F)	FLIGHT CONTROL BACKUP MODULE (63R2)	QES184	35	2 CFF
185	AUX HYD CONT - ON	SYS. TEST AND SYS POWER PANEL (790A1)	QES185	35	2 CFF
186	EMERG FLT HYD - HI	MASTER TEST PANEL (734A1)	QES186	35	1 CFF
187	BACKUP MODULE PRESSURE - CLOSED (> 500 PSI)	FLIGHT CONTROL BACKUP MODULE (63R2)	QES187	35	10 CFF
188	WING/EXT TRANS - ORIDE	WING EXTERNAL TRANSFER SW - S3 (P/O FUEL MANAGEMENT PANEL (707A1))	QAS188	42	2 CFF
189	WING/EXT TRANS - AUTO	WING EXTERNAL TRANSFER SW - S3 (P/O FUEL MANAGEMENT PANEL (707A1))	QAS189	42	2 CFF
190	L AND R WING LOW LEVEL SENSORS - WET	ELECTRONIC CONTROL AMPLIFIER (62A10)	EJS190	42	2 CFF
191	NOSE STRUT - EXTD	NOSE STRUT SWITCH (74S1) P/O LANDING GEAR CONTROL PANEL	GAS191	30	2 CFF
192	LAUNCH BAR - KNEEL	NOSE STRUT SWITCH (74S2) P/O LANDING GEAR CONTROL PANEL	GAS192	30	2 CFF
193	LAUNCH BAR - EXTENDED	P/O LAUNCH BAR PROXIMITY SWITCH (74S2)	GAS193	30	2 CFF
194	LEFT THROTTLE - < MIL FWR	THROTTLE QUADRANT (711A1)	QES194	30	0.1 CFS
195	RIGHT THROTTLE - < MIL FWR	THROTTLE QUADRANT (711A1)	QES195	30	0.1 CFS

TABLE A-4. TRANSDUCERS (SHEET 7 OF 13)

ITEM	SIGNAL NAME/FUNCTION	SIGNAL SOURCE	IDENT	FIG	RATE
196	LAUNCH BAR - ABORT	LAUNCH BAR PANEL (74A1)	GAS196	30	2 CPF
197	HOOK - STOWED	ARRESTING HOOK NOT STOWED SWITCH (49S1)	GAS197	30	2 CPF
198	ANTI-SKID/SPOILER BK - BOTH	ANTI-SKID/SPOILER BK SWITCH-(56) P/O FUEL MANAGEMENT PANEL (707A1)	GAS198	30	2 CPF
199	AUTO PILOT ENGAGE NOSE WHEEL STEERING PUSHBUTTON SWITCH - ON	CONTROL STICK GRIP (20A4)	GAS199	30	2 CPF
200	LEFT THROTTLE - IDLE	THROTTLE QUADRANT (711A1)	QAS200	30	0.1 CPS
201	RIGHT THROTTLE - IDLE	THROTTLE QUADRANT (711A1)	QAS201	30	0.1 CPS
202	MLG DOOR - UP AND LOCKED	MLG DOOR UP AND LOCKED SWITCH (75S2)	GAS202	30	2 CPF
203	LEFT MLG - DOWN AND LOCKED	LEFT MLG DOWN AND LOCKED SWITCH (75S4)	GAS203	30	2 CPF
204	LEFT MLG DOOR - UP AND LOCKED	LEFT MLG DOOR LOCKED/UNLOCKED SWITCH (75S7)	GAS204	30	2 CPF
205	LEFT MLG POSITION - UP AND LOCKED	LEFT MLG POSITION SWITCH (75S13)	GAS205	30	2 CPF
206	RIGHT MLG - DOWN AND LOCKED	RIGHT MLG DOWN AND LOCKED SWITCH (75S9)	GAS206	30	2 CPF
207	RIGHT MLG DOOR - UP AND LOCKED	RIGHT MLG DOOR LOCKED/UNLOCKED SWITCH (75S6)	GAS207	30	2 CPF
208	RIGHT MLG POSITION - UP AND LOCKED	RIGHT MLG DOOR POSITION SWITCH (75S14)	GAS208	30	2 CPF
209	LEFT BRAKE PRESSURE - > 400 PSI	P/O LEFT BRAKE PRESSURE SWITCH (47S1)	GAS209	30	2 CPF
210	RIGHT BRAKE PRESSURE - > 400 PSI	P/O RIGHT BRAKE PRESSURE SWITCH (47S2)	GAS210	30	2 CPF
211	SKID CONTROL - FWR LOSS	SKID CONTROL BOX (52A1)	GAS211	30	2 CPF
212	LIGHT TEST - ACTIVE	PILOT CAUTION ADVISORY INDICATOR	MAS212	30	2 CPF
213	LEFT MLG - RETRACTED	LEFT BRACE PROXIMITY SWITCH (75S11)	GAS213	30	2 CPF
214	RIGHT MLG - RETRACTED	RIGHT BRACE PROXIMITY SWITCH (75S12)	GAS214	30	2 CPF
215	FLAP LEVER - > 10°	FLAP LEVER P/O THROTTLE QUADRANT (711A1)	GAS215	30	10 CPF
216	WING SWEEP - < 57°	P/O WING POSITION SWITCH (51A5)	GAS216	1	0.1 CPS
217	LEFT FLAP - ≥ 25°	LEFT FLAP POSITION SWITCH (20S2)	GAS217	1	10 CPF
218	RIGHT FLAP - ≥ 25°	RIGHT FLAP POSITION SWITCH (20S1)	GAS218	1	10 CPF
219	DLC ENGAGE CHAFF DISPENSE - ON	DLC ENGAGE CHAFF DISPENSE PUSHBUTTON SWITCH P/O CONTROL STICK (20A4)	TMS219	1	2 CPF
220	LEFT TRIM	P/O CONTROL STICK (20A4) - HAND GRIP (20A42) TRIM SWITCH	CFAS220	1	2 CPF
221	RIGHT TRIM	P/O CONTROL STICK (20A4) - HAND GRIP (20A42) TRIM SWITCH	CFAS221	1	2 CPF
222	MASTER RESET - DEPRESS	FUEL MANAGEMENT (707A1) MASTER RESET PUSHBUTTON	UCAS222	1	2 CPF
223	ANTI-SKID/SPOILER BK - SPOILER BK	FUEL MANAGEMENT (707A1) ANTI SKID/SPOILER BK SWITCH	CFAS223	1	2 CPF
224	NO. 4 RIGHT SPOILER - > 0°	NO. 4 RIGHT SPOILER ACTUATOR (20A31)	GAS224	1	0.1 CPS
225	NO. 3 RIGHT SPOILER - > 0°	NO. 3 RIGHT SPOILER ACTUATOR (20A30)	GAS225	1	0.1 CPS
226	NO. 2 RIGHT SPOILER - > 0°	NO. 2 RIGHT SPOILER ACTUATOR (20A29)	GAS226	1	0.1 CPS
227	NO. 1 RIGHT SPOILER - > 0°	NO. 1 RIGHT SPOILER ACTUATOR (20A28)	GAS227	1	0.1 CPS
228	NO. 2 LEFT SPOILER - < 18°	NO. 2 LEFT SPOILER ACTUATOR (20A25)	GAS228	1	0.1 CPS

TABLE A-4. TRANSDUCERS (SHEET 8 OF 13)

ITEM	SIGNAL NAME/FUNCTION	SIGNAL SOURCE	IDENT	FIG.	RATE
229	NO. 1 LEFT SPOILER - < 18°	NO. 1 LEFT SPOILER ACTUATOR (20A24)	CGS229	1	0.1 CFS
230	NO. 2 RIGHT SPOILER - < 18°	NO. 2 RIGHT SPOILER ACTUATOR (20A29)	CGS230	1	0.1 CFS
231	NO. 1 RIGHT SPOILER - < 18°	NO. 1 RIGHT SPOILER ACTUATOR (20A28)	CGS231	1	0.1 CFS
232	LEFT STICK/NORMAL	ROLL SWITCH ASSEMBLY (20A32)	CGS232	1	0.1 CFS
233	RIGHT STICK/NORMAL	ROLL SWITCH ASSEMBLY (20A32)	CGS233	1	9.1 CFS
234	STICK SW	MASTER TEST PANEL (73A41)	CGS234	1	1 CFF
235	NO. 3 LEFT SPOILER - < 18°	NO. 3 LEFT SPOILER ACTUATOR (20A26)	CGS235	1	0.1 CFS
236	NO. 4 LEFT SPOILER - < 18°	NO. 4 LEFT SPOILER ACTUATOR (20A27)	CGS236	1	0.1 CFS
237	NO. 3 RIGHT SPOILER - < 18°	NO. 3 RIGHT SPOILER ACTUATOR (20A30)	CGS237	1	0.1 CFS
238	NO. 4 RIGHT SPOILER - < 18°	NO. 4 RIGHT SPOILER ACTUATOR (20A31)	CGS238	1	0.1 CFS
239	NO. 2 LEFT SPOILER - > 0°	NO. 2 LEFT SPOILER ACTUATOR (20A25)	CGS239	1	0.1 CFS
240	NO. 1 LEFT SPOILER - > 0°	NO. 1 LEFT SPOILER ACTUATOR (20A24)	CGS240	1	0.1 CFS
241	NO. 2 LEFT SPOILER - (-4.5°)	NO. 2 LEFT SPOILER ACTUATOR (20A25)	CGS241	1	0.1 CFS
242	NO. 1 LEFT SPOILER - (-4.5°)	NO. 1 LEFT SPOILER ACTUATOR (20A24)	CGS242	1	0.1 CFS
243	NO. 1 RIGHT SPOILER - (-4.5°)	NO. 1 RIGHT SPOILER ACTUATOR (20A28)	CGS243	1	0.1 CFS
244	NO. 2 RIGHT SPOILER - (-4.5°)	NO. 2 RIGHT SPOILER ACTUATOR (20A29)	CGS244	1	0.1 CFS
245	NO. 3 LEFT SPOILER - > 0°	NO. 3 LEFT SPOILER ACTUATOR (20A26)	CGS245	1	0.1 CFS
246	NO. 4 LEFT SPOILER - > 0°	NO. 4 LEFT SPOILER ACTUATOR (20A27)	CGS246	1	0.1 CFS
247	NO. 3 LEFT SPOILER - (-4.5°)	NO. 3 LEFT SPOILER ACTUATOR (20A26)	CGS247	1	0.1 CFS
248	NO. 4 LEFT SPOILER - (-4.5°)	NO. 4 LEFT SPOILER ACTUATOR (20A27)	CGS248	1	0.1 CFS
249	NO. 3 RIGHT SPOILER - (-4.5°)	NO. 3 RIGHT SPOILER ACTUATOR (20A30)	CGS249	1	0.1 CFS
250	NO. 4 RIGHT SPOILER - (-4.5°)	NO. 4 RIGHT SPOILER ACTUATOR (20A31)	CGS250	1	0.1 CFS
251	TARGET DESIGNATE - UP	TARGET DESIGNATE SWITCH (B5S1)	AA251	17	10 CFF
252	TARGET DESIGNATE - DES	TARGET DESIGNATE SWITCH (B5S1)	AA252	17	10 CFF
253	TARGET DESIGNATE - DN	TARGET DESIGNATE SWITCH (B5S1)	AA253	17	10 CFF
254	CAGE - SEAM	THROTTLE QUADRANT (711A1)	AD254	18	10 CFF
255	WEAPON SELECTOR - GUN	CONTROL STICK (20A4) HANDGRIP (20A4A2)	AD255	18	2 CFF
256	WEAPON TRIGGER - DEPRESSED	CONTROL STICK (20A4) HAND GRIP (20A4A2)	AD256	18	20 CFF
257	STATION 1A SIDEWINDER - FWR INTLK (28VDC RTN)	STATION 1A OUTBOARD SIDEWINDER	AS257	19	2 CFF
258	STATION 1B SIDEWINDER - FWR INTLK (28VDC RTN)	STATION 1B INBOARD SIDEWINDER	AS258	19	2 CFF
259	STATION 8A SIDEWINDER - FWR INTLK (28VDC RTN)	STATION 8A OUTBOARD SIDEWINDER	AS259	19	2 CFF
260	STATION 8B SIDEWINDER - FWR INTLK (28VDC RTN)	STATION 8B OUTBOARD SIDEWINDER	AS260	19	2 CFF



TABLE A-4. TRANSDUCERS (SHEET 9 OF 13)

ITEM	SIGNAL NAME/FUNCTION	SIGNAL SOURCE	IDENT	FIG	RATE
261	STA 4F AIM-7 FWR - ENABLE	LOGIC TIMING CONTROL C-90341/AMG-9 (27A24A3)(720)	AGS261	20	2 CFF
262	STA 5F AIM-7 FWR - ENABLE	LOGIC TIMING CONTROL C-90341/AMG-9 (27A24A3)(720)	AGS262	20	2 CFF
263	STA 3F AIM-7 FWR - ENABLE	LOGIC TIMING CONTROL C-90341/AMG-9 (27A24A3)(720)	AGS263	20	2 CFF
264	STA 6F AIM-7 FWR - ENABLE	LOGIC TIMING CONTROL C-90341/AMG-9 (27A24A3)(720)	AGS264	20	2 CFF
265	STA 1B AIM-7 FWR - ENABLE	LOGIC TIMING CONTROL C-90341/AMG-9 (27A24A3)(720)	AGS265	20	2 CFF
266	STA 8B AIM-7 FWR - ENABLE	LOGIC TIMING CONTROL C-90341/AMG-9 (27A24A3)(720)	AGS266	20	2 CFF
267	MSL AUX FWR - ENABLE	LOGIC TIMING CONTROL C-90341/AMG-9 (27A24A3)(720)	AGS267	20	2 CFF
268	AIM 54 HTR FWR - ON	WEAPON CONTROL SYSTEM AN/AMG9 and AIM 54 LIQUID COOLING SYSTEM	AGS268	20	0.1 CFS
269	STA 1B AIM-7 BATTERY - ARM AND HYDR - ENABLE	LOGIC TIMING CONTROL C-90341/AMG-9 (27A24A3)(720)	AGS269	20	2 CFF
270	STA 3F AIM-7 BATTERY - ARM AND HYDR - ENABLE	LOGIC TIMING CONTROL C-90341/AMG-9 (27A24A3)(720)	AGS270	20	2 CFF
271	STA 4F AIM-7 BATTERY - ARM AND HYDR - ENABLE	LOGIC TIMING CONTROL C-90341/AMG-9 (27A24A3)(720)	AGS271	20	2 CFF
272	STA 5F AIM-7 BATTERY - ARM AND HYDR - ENABLE	LOGIC TIMING CONTROL C-90341/AMG-9 (27A24A3)(720)	AGS272	20	2 CFF
273	STA 6F AIM-7 BATTERY - ARM AND HYDR - ENABLE	LOGIC TIMING CONTROL C-90341/AMG-9 (27A24A3)(720)	AGS273	20	2 CFF
274	STA 8B AIM-7 BATTERY - ARM AND HYDR - ENABLE	LOGIC TIMING CONTROL C-90341/AMG-9 (27A24A3)(720)	AGS274	20	2 CFF
275	AIM-7 MOTOR FIRE - SEL	ARMAMENT PANEL (85A1)	AGS275	20	2 CFF
276	DATA LINK ANTENNA - SELECT	DATA LINK SYSTEM	RUS276	27	
277	INST - ON	SYS TEST - SYS FWR PANEL (790A1)	XAS277	43	
278	CMD SPD - RETURN	DATA LINK SYSTEM	FLS278	15	
279	WEAPON SELECTOR - SW	CONTROL STICK (20A4) HAND GRIP (20A4A2)	YAS279	19	
280	MSL STEPPING SW - DEPRESSED	CONTROL STICK (20A4) HAND GRIP (20A4A2)	YAS280	19	
281	WEAPON SELECTOR SW - PH SP	CONTROL STICK (20A4) HAND GRIP (20A4A2)	YAS281	20	
282	MODE 1 - ENABLE	IFF CONTROL PANEL (09A1)	SXS282	10	
283	MANUAL IFF EMERGENCY - ENABLE	IFF CONTROL PANEL (09A1)	SXS283	10	
284	MODE 2 - ENABLE	IFF CONTROL PANEL (09A1)	SXS284	10	
285	MODE 3A - ENABLE	IFF CONTROL PANEL (09A1)	SXS285	10	
286	SENSITIVITY CONTROL - NORMAL	IFF CONTROL PANEL (09A1)	SXS286	10	
287	STANDBY CONTROL - OPERATING	IFF CONTROL PANEL (09A1)	SXS287	10	
288	FWR RELAY CONTROL - ENABLE	IFF CONTROL PANEL (09A1)	SXS288	10	

TABLE A-4. TRANSDUCERS (SHEET 10 OF 13)

ITEM	SIGNAL NAME/FUNCTION	SIGNAL SOURCE	IDENT	FIG.
500	INSTRUMENT LIGHTING R1 - ON	D/L REPLY - INTRA LIGHT CONTR PANEL (724A1)	LHS500	45
501	WHITE FLOOD-DIM	D/L REPLY - INTRA LIGHT CONTR PANEL (724A1)	LHS501	45
502	WHITE FLOOD-BRT	D/L REPLY - INTRA LIGHT CONTR PANEL (724A1)	LHS502	45
503	CONSOLE LIGHTING - ON	D/L REPLY - INTRA LIGHT CONTR PANEL (724A1)	LHS503	45
504	ACM - ON	MASTER LIGHT CONTROL PANEL (713A1)	LHS504	45
505	INSTRUMENT R3 - ON	MASTER LIGHT CONTROL PANEL (713A1)	LHS505	45
506	WHITE FLOOD - OFF	MASTER LIGHT CONTROL PANEL (713A1)	LHS506	45
507	CONSOLE PA - ON	MASTER LIGHT CONTROL PANEL (713A1)	LHS507	45
508	ACM R1 - OFF	MASTER LIGHT CONTROL PANEL (713A1)	LHS508	45
509	LEFT AUX FLAP - EXTEND	LEFT AUX FLAP EXTEND SW (51S3)	CKS509	29
510	RIGHT AUX FLAP - EXTEND	RIGHT AUX FLAP EXTEND SW (51S4)	CKS510	29
511	RIGHT INBOARD MANEUVER FLAP - EXTEND	RIGHT INBOARD MANEUVER FLAP SW (51S2)	CKS511	29
512	LEFT INBOARD MANEUVER FLAP - EXTEND	LEFT INBOARD MANEUVER FLAP SW (51S1)	CKS512	29
513	WING POS - > 21°	WING POS SW (51A5)	CKS513	29
514	WING POS - > 50°	WING POS SW (51A5)	CKS514	29
515	MASTER RESET - DEPRESSED	FUEL MANAGEMENT PANEL (707A1)	CKS515	29
516	WG SWP	MASTER TEST PANEL (734A1)	MJS516	29
517	ADC ALTITUDE - RELIABLE	AADC (05A1)	PKS517	29
518	IND LT - ON	S2 TEST PANEL (720A1)	DUS518	46
519	R AUTO/STOW - STOW	INLET RAMPS/ENG CRANK (710A1)	KAS519	46
520	L AUTO/STOW - STOW	INLET RAMPS/ENG CRANK (710A1)	KAS520	46
521	FIRST R COMP SW - NOT STOW	FIRST R COMP. RAMP SW (32S6)	KCS521	46
522	SECOND R COMP SW - NOT STOW	SECOND R COMP. RAMP SW (32S7)	KCS522	46
523	FIRST R TRAIL - NOT TRAIL	FIRST R TRAIL SW (32S5)	KCS523	46
524	FIRST L COMP SW - NOT STOW	FIRST L COMP RAMP SW (32S2)	KCS524	46
525	SECOND L COMP SW - NOT STOW	SECOND L COMP RAMP SW (32S3)	KCS525	46
526	FIRST L TRAIL - NOT TRAIL	FIRST L COMP TRAIL SW (32S1)	KCS526	46
527	WING SWP DETENT - ENGAGED	DETENT POS SW (50A2)	CKS527	46
528	L WING SEAL DUMP VALVE - OPEN	L WING SEAL DUMP VALVE (5013)	QAS528	46
529	R WING SEAL DUMP VALVE - OPEN	R WING SEAL DUMP VALVE (5012)	QAS 529	46
530	R GEN CONTROL - NORM	R (S2) MASTER GEN PNL (716A1)	POS530	46
531	R GEN CONTROL - TEST	R (S2) MEDYRT HRN PNL (716A1)	POS531	46
532	R GEN CONTROL FWR - ON	R VOLTAGE REG CONT (66A2)	POS532	46

TABLE A-4. TRANSDUCERS (SHEET 11 OF 13)

ITEM	SIGNAL NAME/FUNCTION	SIGNAL SOURCE	IDENT	FIG.
533	L GEN CONTROL - NORM	L(S1) MASTER GEN PNL (71G11)	P08533	46
534	L GEN CONTROL - TEST	L(S1) MASTER GEN PNL (71G11)	P08534	46
535	I GEN CONTROL FWR - ON	I. VOLTAGE REG CONT (66A1)	P08535	46
536	R RECTIFIER FWR - ON	R VOLTAGE REG CONT (66A2)	P08536	46
537	L RECTIFIER FWR - ON	L VOLTAGE REG CONT (66A1)	P08537	46
538	R DC FWR - ON	R XPMR - RECT (67T12)	PAS538	46
539	L DC FWR - ON	L XPMR - RECT (67T11)	PAS539	46
540	L ENGINE OIL PRESSURE - LOW	L ENG. OIL PRESSURE SW (70A2)	EPF540	46
541	R ENGINE OIL PRESSURE - LOW	R ENG. OIL PRESSURE SW (70A2)	EPF541	46
543	ICE PROBE - ON	ICE-DETECTOR (39A1)	HAS543	46
544	CANOPY SW - OPEN	CANOPY SW (70S1)	DUS544	46
545	PILOT OXY PR - LOW	PILOT OXY PRESS. WARNING SW (41S1)	WHS545	46
546	INFO OXY PR - LOW	INFO OXY PRESS WARNING SW (41S2)	WHS546	46
547	BOARDING LADDER - DN	BOARDING LADDER	DUS547	46
548	COOLING AIR = OVERHEAT	COOLING EFFECT CONTROLLER	HNS548	46
549	RADAR TEST EN - RADIATE & SCAN	RADAR TEST EN CONTR PNL (27A37)	SVS549	46
550	BLEED MANIFOLD SW - > 475°F	BLEED MANIFOLD 475° OVERTEMP SWITCH (42A7)	HCS550	43
551	WHLD HEAT - ON	SYSTEM TEST PANEL (790A1)	HCS551	43
552	FIRE SHORT - ON	SYSTEM TEST PANEL (790A1)	FTS552	43
553	CLANK PULSE - ON	SYSTEM TEST PANEL (790A1)	SNS553	43
554	FIRE DET - ON	MASTER TEST PANEL (73A1)	WGS554	43
555	L. ALARM LAMP - ON	LEFT ALARM CONTROL (71A2)	WGS555	43
556	R. ALARM LAMP - ON	RIGHT ALARM CONTROL (71A1)	WGS556	43
557	SPD BRAKES - HOLD	THROTTLE QUADRANT (71A1)	NAS557	43
558	SPD BRAKES - EXT	THROTTLE QUADRANT (71A1)	NAS558	43
559	LWR SPD BRAKE - IN	LOWER SPEED BRAKE POSITION SWITCH (78S1)	NAS559	43
560	UPPER SPD BRAKE - OTHER	UPPER SPEED BRAKE POSITION SWITCH (78S2)	NAS560	43
561	MASTER TEST - INST	MASTER TEST PANEL (73A1)	DUS561	43
562	NO. 1/NO. 2 - AC/DC RELAYS - ENERGIZED	AC FWR SWITCH ASSEMB (67A2), DC FWR SWITCH ASSEMB (67A3)	MUS562	43
563	OBC	MASTER TEST PANEL (73A1)	MUS563	43
564	EMERG GEN	MASTER TEST PANEL (73A1)	MUS564	43
565	MACH LEV	MASTER TEST PANEL (73A1)	MUS565	43
566	WG SWP	MASTER TEST PANEL (73A1)	MUS566	43
567	TEST INITIATE - ON	ADC (05A1)	MUS567	43



TABLE A-4. TRANSDUCERS (SHEET 12 OF 13)

ITEM	SIGNAL NAME/FUNCTION	SIGNAL SOURCE	IDENT	FIG.
568	NFO SEAT HEIGHT - UP	SEAT BUCKET HEIGHT ADJUSTMENT SWITCH (38A2S1)	WFS568	43
569	NFO SEAT HEIGHT - DOWN	SEAT BUCKET HEIGHT ADJUSTMENT SWITCH (38A2S1)	WFS569	43
570	PILOT SEAT HEIGHT - UP	SEAT BUCKET HEIGHT ADJUSTMENT SWITCH (38A1S1)	WFS570	43
571	PILOT SEAT HEIGHT - DOWN	SEAT BUCKET HEIGHT ADJUSTMENT SWITCH (38A1S1)	WFS571	43
572	EJECT MODE SELECTOR - PILOT	EJECT MODE SELECTOR SWITCH (70S3)	WFS572	43
573	FIRE SHORT - SELECTED	SYS. TEST - SYS PWR PANEL (790A1)	WGS573	43
574	FAULT SIGNAL - LEFT	MACH LEVER CONTROL UNIT (46A1)	DUS574	43
575	FAULT SIGNAL - RIGHT	MACH LEVER CONTROL UNIT (46A1)	DUS575	43
576	GO SIGNAL	MACH LEVER CONTROL UNIT (46A1)	DUS576	43
577	AIR PRESS $\geq 10.5$ PSIG	AUX FUEL TANK AIR PRESSURE SWITCH (62S5)	DES577	43
578	AIR PRESS $< 6.5$ PSIG	AUX FUEL TANK AIR PRESSURE SWITCH (62S5)	DES578	43
579	R-AICS HYDR - ON	RIGHT AIR INLET CONTROL PROGRAMMER (32A7)	DHS579	46
580	L-AICS HYDR - ON	LEFT AIR INLET CONTROL PROGRAMMER (32A7)	DHS580	46
581	L-AICS - 28VDC	LEFT AIR INLET CONTROL PROGRAMMER (32A7)	DHS581	46

TABLE A-4. TRANSDUCERS (SHEET 13 OF 13)

ITEM	SIGNAL NAME/FUNCTION	SIGNAL SOURCE	IDENT	FIG.
700	LEFT - TOOL IN	LEFT LOAD SAFETY SWITCH (25S3)	TEST00	1A
701	RIGHT - TOOL IN	RIGHT LOAD SAFETY SWITCH (25S4)	TEST01	1A
702	ALE-29 - SELECTED	SYS TEST/SYS FWR PANEL (790A1)	TEST02	1A
703	ALQ-100 - NO GO	ALQ-100 RECEIVER - TRANSMITTER (23A3)	TEST03	1A
704	STANDBY - INDICATION	ALQ-100 RECEIVER-TRANSMITTER (23A3)	TEST04	1A
705	LANE TEST - GND	NOF CAUTION ADVISORY INDICATOR (69A2A1)	TEST05	1A
706	MISSILE - ALERT/LAUNCH	APR27 RECEIVER (22A6)	TEST06	1A
707	PILOT DISPENSE COMMAND - ENABLE	CHIFF/FLARE DISPENSE PANEL (25A2)	TEST07	1A
708	REPEAT MODE - SELECT	ALQ-100 RECEIVER-TRANSMITTER (23A3)	TEST08	1A
709	NFO ASK27 - ON	NFO MAIN-DATA LINK CONTROL PANEL (15A2)	RFS709	3A
710	PILOT ASK27 - ON	PILOT MAIN-DATA LINK CONTROL PANEL (15A1)	RFS710	3A
711	PILOT - FORCED REPLY	PILOT MAIN-DATA LINK CONTROL PANEL *15A1)	RFS711	3A
712	NFO - FORCED REPLY	NFO MAIN-DATA LINK CONTROL PANEL (15A2)	RFS712	3A
713	CAINS - ALIGN	CSDS (07A1)	RFS713	3A
714	D/L RAD - SELECTED	MASTER TEST PANEL (73A1)	RFS714	3A
715	ASK27 - SELECTED	SYS TEST - SYS FWR PANEL (790A1)	RFS715	3A
716	PILOT - CANCEL REPLY	PILOT MAIN DATA LINK CONTROL PANEL *15A1)	RFS716	3A
717	NFO - CANCEL REPLY	NFO MAIN DATA LINK CONTROL PANEL (15A2)	RFS717	3A
718	MASTER - EMERG	IFF CONTROL PANEL (09A1)	SXS718	3A
719	WCS - STDBY/SMIT ON SELECT	P/O HAND CONTROL (27A20) (560) WCS SWITCH	THS719	4A
720	IR COOLING - INTERLOCK	INFRARED AMPLIFIER *27A22) (120)	THS720	5A
721	OIL FLOW > 1.0 GPM	RADAR TRANSMITTER (27A8) (011)	THS721	4A
722	HYDRAULICS - ON	REGULATED POWER SUPPLY (27A24A4) (610) (HYDRAULICS ON)	THS722	4A
723	THERMAL SWITCH - CLOSED	RADAR ANTENNA (27A2) (031)	THS723	4A
724	WCS 28VDC - EXT	REGULATED POWER SUPPLY (27A24A4) (610) (WCS 28VDC EXT)	THS724	4A
726	RADAR TEST ENABLE - SCAN ONLY	RADAR TEST ENABLE CONTROL PANEL (27A37)	THS726	4A
727	DC REG ON - ENABLE	REGULATED POWER SUPPLY (27A24A4) (610) (DC REG ON ENABLE)	THS727	4A
728	IR/TV ON - SELECT	P/O HAND CONTROL (27A20) (560) IR/TV SWITCH	THS728	5A
729	IR/TV STBY - SELECT	P/O HAND CONTROL (27A20) (560) IR/TV SWITCH	THS729	5A

# Appendix B FUNCTIONAL DIAGRAM DATA TABULATION

FIGURE 1 SHEET 1

TABLE 1 F-14 SOSTEL SIGNAL TRANSDUCERS

1 Table Item #	2 Signal Name/Function	3 Identifier Code	4 Signal Source Box Identification	5 Point of Origin	6 Transducer Type	7 Present Signal Characteristics	8 Associated Loads	9 Conventional Switches Being Replaced or Deleted	10 Operational Address	11 Reference Drawings	12 Associated Boolean Equation	13 Conditioning Technique
001	< 2° Wing Sweep	035001	Wing Position Switch (51A5)	FS 435	Limit Switch (DPDT)	Open or Switch- ed 28 VDC	1) K53, K57 Relays (Right Glove Relay Box 772A1)	DPDT Limit Switch (51A5)	03P01	WSPD Fig. 1 Zone 70B	009 58A	Solid State
002	Left MLG - Weight on Wheels	035002	Left MLG Safety Switch (48S2)	Left MLG (ML100) (FS570)	Limit Switch (4PDT)	Open or Switch- ed 28 VDC	K10, K29, K96, K31, K30, K13, K12, K2, K32 (Right Glove Relay Box)	4 PNT Limit Switch (48S1)	06P01	WSPD Fig. 1 (See Land- ing Gear Safety - Interlock System A51 AGO 94H4)	237 261 267 242 268 275 244 263 276 259 264 277 260 265 243 016 266 278 026 280 095 027 281 096 028 286 097 031 287 098 206 295 101 210 296 112 211 283 219 236 284 214 233 542 213 234 543 212 235 552 500 704 558 279 705 312 310 715 313 311 721 270 580 722 735 581 723 737 582 724 738 583 725 739 584 726 544 587 545 568	Solid State
102	Right MLG - Weight on Wheels	035102	Right MLG Safety Switch (48S2)	Right MLG (ML100) (FS570)	Limit Switch (4PDT)	Open or Switch- ed 28 VDC	K20, K17, K21, K62, K2, K89, K22, R6 (Left Glove Relay Box)	4 PNT Limit Switch (48S2)	07P01	WSPD Fig. 1 Zone 70B	009 58A	Solid State
001	Rudder Trim Switch - Left	035001	Inlet Rampa/Eng Crank/Throttle Control Panel (710A1)	Pilots Left Side Console (FS225)	Slide Switch (TFTV0)	Open/28 VDC Open/11V 9B or 9C Open/11V 9A	Rudder Trim Actuator (20A17)	Triple Pole, Double Throw Center Off Slide Switch (710 A1)	01P01	WSPD Fig. 1 Zone 65A	086 087 089	Solid State
002	Rudder Trim Switch - Right	035002	Inlet Rampa/Eng Crank/Throttle Control Panel (710A1)	Pilots Left Side Console (FS225)	Slide Switch (TFTV0)	See Item 021	Rudder Trim Actuator (20A17)	Triple Pole Double Throw Center Off Slide Switch (710A1)	01P02	WSPD Fig. 1 Zone 65A	086 088 089	Solid State

FIGURE 1 SHEET 2

TABLE 1 F-14 SCOTEL SIGNAL TRANSDUCERS

1 Table Item #	2 Signal Name/Function	3 Identifier Code	4 Signal Source Box Identification	5 Point of Origin	6 Transducer Type	7 Present Signal Characteristics	8 Associated Loads	9 Conventional Switches Being Replaced or Deleted	10 Operational Address	11 Reference Drawings	12 Associated Boolean Equation	13 Conditioning Technique
003	Trim Switch-up	CFBX3	Control Stick (204A) Hand Grip (204A2) Trans- ducer Assy (204A1)	Pilots Cockpit (F3225)	a. Position Rotary Switch	Trim up = 25 VDC Trim up = Open	K52 Nose Up Trim Relay (Left Glove Relay Box 773A1)	Control Stick Trim Switch	02P01	INSPD Fig. 1 Zone 76C	090 091 093	Solid State
004	Trim Switch- Down	CFBX4	Control Stick (204A) Hand Grip (204A2) Transducer (Assy (204A1)	Pilots Cockpit (F3225)	b. Position Rotary Switch	Trim Down = 25VDC Trim Down = Open	K53 Nose Down Trim Relay (Left Glove Relay Box 773A1)	Control Stick Trim Switch	02P02	INSPD Fig. 1 Zone 76C	090 092 093	Solid State
005	Altitude Hold Selected	CFBX5	APCS Control Panel (2049)	Pilots Left Side Console (F3225)	Voltage Sensing Adapter	Att. Hold Sel- ected = 25 VDC Att. Hold Sel- ected = Open or Gnd?	K58 Manual Trim Control Relay (Right Glove Relay Box 773A1)	M/A	05D01	INSPD Fig. 1 Zone 18C, 89C	090 305 091 306 092 307 093 308 094	External Signal Adapter
031	Combined Hy- draulic Pres- sure Switch - Normal (x100PSI)	DRE031	Comb Hyd Pressure Switch (63S1)	(F3625)	Pressure Switch	Normal=25 VDC Low = Open	a) External Elec Hyr Connector (666A03) discrete b) Pitch Computer Dis- crete c) Yaw Com- puter Dis- crete d) Roll Com- puter Dis- crete	Comb Hyd Pressure Switch (63S1)	06P02	INSPD Fig. 1 Zone 70C	099 262 263 295 265 273 270 735	Solid State
032	Pit Hyd Pres- sure Switch - Normal (x2100PSI)	DRE032	Pit Hyd Pressure Switch (63S2)	(F3625)	Pressure Switch	Normal=25VDC Low=Open	a) Pitch Computer Discrete b) Yaw Computer Discrete c) Roll Com- puter Dis- crete	Pit Hyd Pressure Switch (63S2)	06P03	INSPD Fig. 1 Zone 70C	100 264 283 262 265 284 263 270 295 273 735	Solid State

TABLE 1. P-14 SUBTEL SIGNAL TRANSDUCERS

1 Table Item #	2 Signal Name/Function	3 Identifier Code	4 Signal Source Box Identification	5 Point of Origin	6 Transducer Type	7 Present Signal Characteristics	8 Associated Loads	9 Conventional Switches Being Replaced or Deleted	10 Operational Address	11 Reference Drawings	12 Associated Boolean Equation	13 Conditioning Technique
033	Autopilot En- gage Nose- wheel Steering - Engage	GIS033	Control Stick (204A) Hand Grip (204A2)	Pilots Cockpit (F5225)	Pushbutton Switch	Engage=25VDC Disengage=Open	a) Pitch Computer (20A2) b) Roll Com- puter (20A3)	Autopilot engage Nose Wheel Steering pushbutton switch	02F03	145FD Fig. 1 Zone 37B	101	Solid State



FIGURE 1 SHEET 1

TABLE 1 F-14 SYSTEM SIGNAL TRANSDUCERS

1 Table Item #	2 Signal Name/Function	3 Identifier Code	4 Signal Source Box Identification	5 Point of Origin	6 Transducer Type	7 Present Signal Characteristics	8 Associated Loads	9 Conventional Switches Being Replaced or Deleted	10 Operational Address	11 Reference Drawings	12 Associated Boolean Equation	13 Conditioning Technique
216	Wing Sweep - < 57°	QSS216	F/O Wing Position Switch (51A5)	FS 940 WL 170	Limit Switch DDET	< 57° = Switched 28VDC > 57° = Open	Roll Com- puter (20A3)	Wing Position Switch Wing Sweep Less than 57° (28VDC)	QSP01	INSPD Fig. 1 Zone 72C	302	Solid State
217	Left Flap - ± 25°	QSS217	Left Flap Position Switch (20A2)	Left Wing FS225 HL360	Limit Switch SDT	± 25° = Switched 28VDC < 25° = Open	KL ARC Switching Assembly (20A4)	Left Flap Position Switch (20A2)	QSP04	INSPD Fig. 1 Zone 77A	303 304 714 594	Solid State
218	Right Flap - ± 25°	QSS218	Right Flap Position Switch (20A1)	Right Wing FS225 HL360	Limit Switch SDT	± 25° = Switched 28VDC < 25° = Open	K2 ARC Switch- ing Assembly (20A4)	Right Flap Position Switch (20A1)	QTP02	INSPD Fig. 1 Zone 73C	303 304 714 594	Solid State
219	ILC Engage Chair/Disengage- ON	TMS219	ILC Engage/Chair Disengage Pushbutton Switch F/O Control Stick (20A4)	Pilots Cockpit FS225	Pushbutton Switch SP	ON = Switched 28 VDC OFF = Open	a) Pitch Capt (20A2) b) Roll Com- puter (20A3) c) K3-ILC trim servo engage F/O Right Glove Relay Box (77A1)	ILC Engage Chair Disengage Push- button Switch	QUP03	INSPD Fig. 1 Zone 37A	304 714	Solid State
220	Left - Trim	CPS220	F/O Control Stick (20A4) - Hand Grip (20A4A2) Trim Switch	Pilots Cockpit FS225	4 Position Rotary Switch	Left Trim = Switched 28VDC Left Trim Rot = Open	K55 - Left Trim F/O Left Glove Relay Box (77A1)	Control Stick Trim Switch	QSP04	INSPD Fig. 1 Zone 86C	305 307 308	Solid State
221	Right-Trim	CPS221	F/O Control Stick (20A4) - Hand Grip (20A4A2) Trim Switch	Pilots Cockpit FS225	4 Position Rotary Switch	Right Trim = Switched 28VDC Right Trim Rot = Open	K54 - Right Trim F/O Left Glove Relay Box (77A1)	Control Stick Trim Switch	QSP05	INSPD Fig. 1 Zone 86C	305 306 308	Solid State

FIGURE 1. SHEET 5

TABLE 1. F-14 SOSTEL SIGNAL TRANSDUCERS

1 Table Item #	2 Signal Name/Function	3 Identifier Code	4 Signal Source Box Identification	5 Point of Origin	6 Transducer Type	7 Present Signal Characteristics	8 Associated Loads	9 Conventional Switches Being Replaced or Deleted	10 Operational Address	11 Reference Drawings	12 Associated Boolean Equation	13 Conditioning Technique
222	Master Reset - Depressed	UCS222	Fuel Management (707A1) Master Reset Pushbutton	Pilots Left Ver- tical Con- sol FS 225	3 Pole Push- button	Depressed = Switched 28VDC Depressed Not = Open	Pitch CMPTK Yaw CMPTK Roll CMPTK (Master Re- set Signal)	Master Reset Push- button	01P04	INSPD Fig. 1 Zone 70A	309	Solid State
223	Anti Skid/ Spoiler BK - Spoiler BK	CBS223	Fuel Management (707A1) Anti Skid/Spoiler BK Switch	Pilots Left Ver- tical Con- sol FS 225	Toggle SPDT	Spoiler BK = Switched 28VDC OFF = Open	Pitch CMPTK Roll CMPTK (Gnd Roll Braking Sig- nal)	Anti-Skid/Spoiler BK Switch	01P05	INSPD Fig. 1 Zone 70A	312 313 310 311	Solid State
224	No. 4 Right Spoiler - > 0°	CBS224	No. 4 Right Spoiler Actuator (20A31)	Right Wing FS 600 BL 320	Limit Switch SPDT	> 0° = Switched 28VDC 0° = Open	K77-Gnd Roll Braking No. 2 (R. Glove Belay Box 772A1)	N/A	07P03	INSPD Fig. 1 Zone 76C	320 313 310	Resistor Divider Adapter
225	No. 3 Right Spoiler - > 0°	CBS225	No. 3 Right Spoiler Actuator (20A30)	Right Wing FS 600 BL 260	Limit Switch SPDT	> 0° = Switched 28VDC 0° = Open	K77 - Gnd Roll Braking No. 2 (R. Glove Belay Box 772A1)	N/A	07P04	INSPD Fig. 1 Zone 75C	320 313 310	Resistor Divider Adapter
226	No. 2 Right Spoiler - > 0°	CBS226	No. 2 Right Spoiler Actuator (20A29)	Right Wing FS 600 BL 240	Limit Switch SPDT	> 0° = Switched 28VDC 0° = Open	K56 - Gnd Roll Braking No. 1 (R. Glove Belay Box 772A1)	N/A	07P05	INSPD Fig. 1 Zone 79B	314 312 311	Resistor Divider Adapter
227	No. 1 Right Spoiler - > 0°	CBS227	No. 1 Right Spoiler Actuator (20A28)	Right Wing FS 600 BL 200	Limit Switch SPDT	> 0° = Switched 28VDC 0° = Open	K56 - Gnd Roll Braking No. 1 (R. Glove Belay Box 772A1)	N/A	07P06	INSPD Fig. 1 Zone 78B	314 312 311	Resistor Divider Adapter
228	No. 2 Left Spoiler - < 18°	CBS228	No. 2 Left Spoiler Actuator (20A25)	Left Wing FS 600 BL 240	Limit Switch SPDT	< 18° = Switched 28 VDC < 18° = Open	-	N/A	07P05	INSPD Fig. 1 Zone 76A	312	Resistor Divider Adapter



FIGURE 1 - SHEET 6

TABLE 1 F-14 SATEL SIGNAL TRANSDUCERS

1 Table Item #	2 Signal Name/Function	3 Identifier Code	4 Signal Source Box Identification	5 Point of Origin	6 Transducer Type	7 Present Signal Characteristics	8 Associated Loads	9 Conventional Switches Being Replaced or Deleted	10 Operational Address	11 Reference Drawings	12 Associated Boolean Equation	13 Conditioning Technique
229	No. 1 Left Spoiler - <180°	CS229	No. 1 Left Spoiler Actuator (20A24)	Left Wing FS600 BL200	Limit Switch SDT	< 180° = Switched 28VDC ≥ 180° = Open	-	N/A	06P06	INSPD Fig. 1 Zone 74A	312	Resistor Divider Adapter
230	No. 2 Right Spoiler - <180°	CS230	No. 2 Right Spoiler Actuator (20A25)	Right Wing FS600 BL240	Limit Switch SDT	< 180° = Switched 28VDC ≥ 180° = Open	-	N/A	07P07	INSPD Fig. 1 Zone 79B	312	Resistor Divider Adapter
231	No. 1 Right Spoiler - <180°	CS231	No. 1 Right Spoiler Actuator (20A28)	Right Wing FS600 BL200	Limit Switch SDT	< 180° = Switched 28VDC ≥ 180° = Open	-	N/A	07P08	INSPD Fig. 1 Zone 76B	312	Resistor Divider Adapter
232	Left Stick/ Normal	CS232	Roll Switch Assem- bly (20A32)	FS625	Limit Switch DPT	Left Stick/ Normal = Switched 28VDC Right Stick = Open	-	N/A	06P07	INSPD Fig. 1 Zone 82B	312 313	Resistor Divider Adapter
233	Right Stick/ Normal	CS233	Roll Switch Assem- bly (20A32)	FS625	Limit Switch DPT	Right Stick/ Normal = Switched 28VDC Left Stick = Open	-	N/A	06P08	INSPD Fig. 1 Zone 82B	312 313	Resistor Divider Adapter
234	Stick SW	CS234	Master Test Panel (73A41)	Pilots Right Side Console FS225	12 Position Rotary Switch with Push Test	Stick SW = switched 28VDC Stick SW = Open	-		02P06	INSPD Fig. 1 Zone 81A	312 313	Solid State
235	No. 3 Left Spoiler - <180°	CS235	No. 3 Left Spoiler Actuator (20A26)	Left Wing FS600 BL260	Limit Switch	< 180° = Switched 28VDC ≥ 180° = Open	-	N/A	06P09	INSPD Fig. 1 Zone 76B	313	Resistor Divider Adapter
236	No. 4 Left Spoiler - <180°	CS236	No. 4 Left Spoiler Actuator (20A27)	Left Wing FS600 BL300	Limit Switch	< 180° = Switched 28VDC ≥ 180° = Open	-	N/A	06P10	INSPD Fig. 1 Zone 75B	313	Resistor Divider Adapter

TABLE I. F-14 SOTEL SIGNAL TRANSDUCERS

1 Table Item #	2 Signal Name/Function	3 Identifier Code	4 Signal Source Box Identification	5 Point of Origin	6 Transducer Type	7 Present Signal Characteristics	8 Associated Loads	9 Conventional Switches Being Replaced or Deleted	10 Operational Address	11 Reference Drawings	12 Associated Boolean Equation	13 Conditioning Technique
237	No. 3 Right Spoiler - <18°	CGS237	No. 3 Right Spoiler Actuator (20A30)	Right Wing FS600 BL260	Limit Switch	< 18° = Switched 28VDC ≥ 18° = Open	-	N/A	OTV9	INSPD Fig. 1 Zone 75C	313	Resistor Divider Adapter
238	No. 4 Right Spoiler - <18°	CGS238	No. 4 Right Spoiler Actuator (20A31)	Right Wing FS600 BL320	Limit Switch	< 18° = Switched 28VDC ≥ 18° = Open	-	N/A	OTV10	INSPD Fig. 1 Zone 76C	313	Resistor Divider Adapter
239	No. 2 Left Spoiler - > 0°	CGS239	No. 2 Left Spoiler Actuator (20A25)	Left Wing FS600 BL240	Limit Switch	> 0° = Switched 28VDC 0° = Open	Control Sur- face Posi- tion Indica- tor (dHMI)	N/A	OGP11	INSPD Fig. 1 Zone 76A	315	Resistor Divider Adapter
240	No. 1 Left Spoiler - > 0°	CGS240	No. 1 Left Spoiler Actuator (20A24)	Left Wing FS600 BL200	Limit Switch	> 0° = Switched 28VDC 0° = Open	Control Sur- face Posi- tion Indica- tor (dHMI)	N/A	OGP12	INSPD Fig. 1 Zone 76A	315	Resistor Divider Adapter
241	No. 2 Left Spoiler - (-4, 5°)	CGS241	No. 2 Left Spoiler Actuator (20A25)	Left Wing FS600 BL240	Limit Switch	-4, 5° = Switched 28VDC -4, 5° = Open	Control Sur- face Posi- tion Indica- tor (dHMI)	N/A	OGP13	INSPD Fig. 1 Zone 76A	316	Resistor Divider Adapter
242	No. 1 Left Spoiler - (-4, 5°)	CGS242	No. 1 Left Spoiler Actuator (20A24)	Left Wing FS600 BL200	Limit Switch	-4, 5° = Switched 28VDC -4, 5° = Open	Control Sur- face Posi- tion Indica- tor (dHMI)	N/A	OGP14	INSPD Fig. 1 Zone 76A	316	Resistor Divider Adapter
243	No. 1 Right Spoiler - (-4, 5°)	CGS243	No. 1 Right Spoiler Actuator (20A28)	Right Wing FS600 BL200	Limit Switch	-4, 5° = Switched 28VDC -4, 5° = Open	Control Sur- face Posi- tion Indica- tor (dHMI)	N/A	OTV11	INSPD Fig. 1 Zone 77B	317	Resistor Divider Adapter
244	No. Right Spoiler - (-4, 5°)	CGS244	No. Right Spoiler Actuator (20A29)	Right Wing FS600 BL240	Limit Switch	-4, 5° = Switched 28VDC -4, 5° = Open	Control Sur- face Posi- tion Indica- tor (dHMI)	N/A	OTV12	INSPD Fig. 1 Zone 77B	317	Resistor Divider Adapter

TABLE 1. F-14 SUSTEL SIGNAL TRANSDUCERS

1 Table Item #	2 Signal Name/Function	3 Identifier Code	4 Signal Source Box Identification	5 Point of Origin	6 Transducer Type	7 Present Signal Characteristics	8 Associated Loads	9 Conventional Switches Being Replaced or Deleted	10 Operational Address	11 Reference Drawings	12 Associated Boolean Equation	13 Conditioning Technique
245	No. 3 Left Spoiler - >0°	CG245	No. 3 Left Spoiler Actuator (20A26)	Left Wing FS600 BL260	Limit Switch	> 0° = Switched 28VDC 0° = Open	Control Sur- face Posi- tion Indica- tor (GAMI)	N/A	06P15	WSPD Fig.1 Zone 76B	318	Resistor Divider Adapter
246	No. 4 Left Spoiler - >0°	CG246	No. 4 Left Spoiler Actuator (20A27)	Left Wing FS600 BL350	Limit Switch	> 0° = Switched 28VDC 0° = Open	Control Sur- face Posi- tion Indica- tor (GAMI)	N/A	06P16	WSPD Fig.1 Zone 74B	318	Resistor Divider Adapter
247	No. 3 Left Spoiler - (-4.5°)	CG247	No. 3 Left Spoiler Actuator (20A26)	Left Wing FS600 BL260	Limit Switch	-4.5° = Switched 28VDC -1.5° = Open	Control Sur- face Posi- tion Indica- tor (GAMI)	N/A	06P17	WSPD Fig.1 Zone 76B	319	Resistor Divider Adapter
248	No. 4 Left Spoiler - (-4.5°)	CG248	No. 4 Left Spoiler Actuator (20A27)	Left Wing FS600 BL350	Limit Switch	-4.5° = Switched 28VDC -1.5° = Open	Control Sur- face Posi- tion Indica- tor (GAMI)	N/A	06P18	WSPD Fig.1 Zone 75B	319	Resistor Divider Adapter
249	No. 3 Right Spoiler - (-4.5°)	CG249	No. 3 Right Spoiler Actuator (20A30)	Right Wing FS600 BL260	Limit Switch	-4.5° = Switched 28VDC -1.5° = Open	Control Sur- face Posi- tion Indica- tor (GAMI)	N/A	07P13	WSPD Fig.1 Zone 75C	321	Resistor Divider Adapter
250	No. 4 Right Spoiler - (-4.5°)	CG250	No. 4 Right Spoiler Actuator (20A31)	Right Wing FS600 BL350	Limit Switch	-4.5° = Switched 28VDC -1.5° = Open	Control Sur- face Posi- tion Indica- tor (GAMI)	N/A	07P14	WSPD Fig.1 Zone 76C	321	Resistor Divider Adapter

TABLE II F-14 SOLID STATE POWER CONTROLLERS AND DRIVERS

1 Table Item #	2 Type of Power Controller	3 Rating V & I	4 Associated Loads	5 Duty Cycle	6 Load Power Dissipation	7 P.C. Location	8 Conventional Devices Being Replaced	9 Operational Address	10 Identifier Code	11 Reference Drawings	12 Associated Boolean Equations
001	AC - 1 Pole	V = 115VAC I = 3 AMP	MACH Trim Actuator (20A15A2)	Contin- uous 100%	115 VA 92 Watts - 69 WARS P.F. = -0.8		CB11 - Mech Trim AC (3 AMP) (35A6)	11Q01	CHL001	INSFD Fig. 1 Zone 32A	001
002	AC - 1 Pole	V = 115VAC I = 2 AMP	1) Rudder Authority Control Actuator (20A22) Fixed Phase 2) Roll Authority Control Actuator (20A23) Fixed Phase	Contin- uous 100%	230 VA 207 Watts -100 WARS P.F. = -0.9		CB10 - Fit Control Authority AC (3 AMP) (35A6)		CHL002	INSFD Fig. 1 Zone 66A, 67A	002
003	AC - 1 Pole	V = 115VAC I = 1.5 AMP	Pitch Computer (20A2)	Contin- uous 100%			CB4 - Pitch CMPT AC (5 AMP) (35A6)	09Q14 11Q02	UCL003	INSFD Fig. 1 Zone 41C	003
004	AC - 1 Pole	V = 115VAC I = 1.5 AMP	Pitch Computer (20A2) Auto Pitch Drive Trim	Contin- uous 100%			CB6 - Auto Pitch Drive Trim (3 AMP) (35A6)	09Q15	UCL004	INSFD Fig. 1 Zone 41C	004
005	AC - 1 Pole	V = 115VAC I = 1.5 AMP	Yaw SAS Computer "A" Power Supply (20A1)	Contin- uous 100%			CB7 - Yaw SAS "A" Pwr Supply (3 AMP) (35A6)	09Q16	UCL005	INSFD Fig. 1 Zone 61C	005
006	AC - 1 Pole	V = 115VAC I = 1.5 AMP	Yaw SAS Computer "B" Power Supply (20A1)	Contin- uous 100%			CB9 - Yaw SAS "B" Pwr Supply (3 AMP) (35A6)	09Q17	UCL006	INSFD Fig. 1 Zone 61C	006
007	AC - 1 Pole	V = 115VAC I = 1.5 AMP	Yaw SAS Computer "B" Power Supply (20A1)	Contin- uous 100%			CB8 - Yaw SAS "B" Pwr Supply (3 AMP) (35A6)	09Q18	UCL007	INSFD Fig. 1 Zone 61C	007
008	AC - 1 Pole	V = 115VAC I = 1.5 AMP	Roll Computer 115 VAC OA (20A3)	Contin- uous 100%			CB1 - Roll CMPT AC (5 AMP) (35A6)	01Q39	UCL008	INSFD Fig. 1 Zone 21C	008
009	DC - 1 Pole	V = 28VDC	#1 Left (20A24), #2 Left (20A25), #1 Right (20A26), #2 Right (20A29), Spoiler Actuator Solenoid Operated Control Valves	Contin- uous 100%			CB5 - Inboard Spoiler Contr (5 AMP) (35A6) R57 - Right Glove Box Relay	11Q03	CHL009	INSFD Fig. 1 Zone 73A, 75A, 77B, 79B	009

FIGURE 1. SHEET 2

TABLE 11. P-14 SOLID STATE POWER CONTROLLERS AND DRIVERS

1 Table Item #	2 Type of Power Controller	3 Rating V & I	4 Associated Loads	5 Duty Cycle	6 Load Power Dissipation	7 P.C. Location	8 Conventional Devices Being Replaced	9 Operational Address	10 Identifier Code	11 Reference Drawings	12 Associated Boolean Equations
010	DC - 1 Pole	V = 28VDC	#3 Left (20A26) #4 Left (20A27) #5 Right (20A30) #6 Right (20A31) Spoiler Actuator Solenoid Operated Control Valves	Contin- uous 100%			CB37 (5 AMP) Outbd Spoiler Contr (36A) K53 - Right Glove Box Relay	11Q04	UCL010	INSFD Fig. 1 Zone 7A, B, 7A-C, 75B, 75C	010
011	DC - 1 Pole	V = 28VDC	Roll Computer (20A1) Mech Trim 28VDC	Contin- uous 100%			CB10 - Mech Trim DC (5 AMP) (36A3)	01Q22	UCL011	INSFD Fig. 1 Zone 21C	011
012	DC - 1 Pole	V = 28VDC	Yaw SAS Computer (20A1) "A" Power Supply	Contin- uous 100%			CB41 - Yaw SAS "A" (5 AMP) (36A2)	09Q19	UCL012	INSFD Fig. 1 Zone 61C	012
013	DC - 1 Pole	V = 28VDC	Yaw SAS Computer (20A1) "B" Power Supply	Contin- uous 100%			CB40 - Yaw SAS "B" (5 AMP) (36A2)	09Q20	UCL013	INSFD Fig. 1 Zone 61C	013
014	DC - 1 Pole	V = 28VDC	1) Yaw Computer (20A1) Roll Author- ity 28VDC 2) Yaw Computer (20A1) Rudder Authority 28VDC	Contin- uous 100%			CB12 - Pit Contr Auth DC (5 AMP) (36A3)	09Q21	UCL014	INSFD Fig. 1 Zone 57B	014
015	DC - 1 Pole	V = 28VDC	Yaw SAS Computer (20A1) "M" Power Supply	Contin- uous 100%			CB39 - (5 AMP) Yaw SAS "M" (36A2)	09Q22	UCL015	INSFD Fig. 1 Zone 61C Zone 82C	015
016	DC - 1 Pole	V = 28VDC	1) Roll SAS Computer (20A3) Weight on Wheels Signal (28 VDC) 2) Pitch SAS Com- puter (20A2) MCM (28VDC) 3) Yaw SAS Computer (20A1) MCM (28VDC)	Contin- uous 100%			K12 - MLO Safety Right Glove Box Relay (Share CB39 with Yaw SAS "M") Item 015	01Q45 09Q23	UCL016	INSFD Fig. 1 Zone 82C	016



FIGURE 1 SHEET 3

TABLE II F-14 SOLID STATE POWER CONTROLLERS AND DRIVERS

1 Table Item #	2 Type of Power Controller	3 Rating V & I	4 Associated Loads	5 Duty Cycle	6 Load Power Dissipation	7 P.C. Location	8 Conventional Devices Being Replaced	9 Operational Address	10 Identifier Code	11 Reference Drawings	12 Associated Boolean Equations
017	AC - 1 Pole	V = 26VAC ØA	1) Roll SAS Com- puter (20A3) INS 26VAC Ø Reference 2) IMØ (ØA1) 26VAC ØA 3) CSØC (Ø7A1) 26VAC ØA	Contin- uous 100%			CB5 (3AMP) INS Sync/ ACM PH Lt (35A4)	01Q34	UCL017	IWSFD Fig. 1 Zone 21A IWSFD Fig. 14 Zone 16A Zone 25A	017
016	AC - 1 Pole	V = 115VAC ØA I = 5A	a) Rudder Trim Actuator (20A17) 115VAC ØA				CB4 (5A) Rudder Trim PH A (35A2)	11Q05	CJL086	IWSFD Fig. 1 Zone 3B, 65A 93B IWSFD Fig. 2 Zone 2	086
087	AC - 1 Pole	V = 115VAC ØB I = 5A	Rudder Trim Actuator (20A17) 115VAC ØB				CB9 (5A) Rudder Trim PH B (35A4)	11Q06	CJL087	IWSFD Fig. 1 Zone 3B, 65A 93B IWSFD Fig. 2 Zone 2	087
088	AC - 1 Pole	V = 115VAC ØC I = 5A	Rudder Trim Actuator (20A17) 115VAC ØC				CB9 (5A) Rudder Trim PH C (35A4)	11Q07	CJL088	IWSFD Fig. 1 Zone 3A, 65B 93B IWSFD Fig. 2 Zone 2	088
089	DC - 1 Pole	V = 28VDC	a) Rudder Trim Actuator (20A17) 28VDC Clutch/ Brake Solenoid				CB7 L DC Test-Rudder Trim (36A2)	11Q08	CJL 089	IWSFD Fig. 1 Zone 4B, 65B 93B NAVAIR OI-F14AAA-2- 2-9 Fig. 5 Page 48 IWSFD Fig. 1 Zone 3B, 67A 65B	089
090	AC - 1 Pole	V = 115 VAC ØA I = 5A	a) Pitch and Mech Trim Actuator (20A15) 115VAC ØA				CB5 (5A) L PH A Test/ Roll Trim (35A2)	11Q09	CFI090		090
091	AC - 1 Pole	V = 115VAC ØB I = 5A	Pitch and Mech Trim Actuator (20A15) 115VAC ØB				CB1Ø (5A) L PH B Test/ P-Roll Trim (35A4)	11Q10	CFI091	IWSFD Fig. 1 Zone 3A, 67A 65B	091

FIGURE 1 SHEET 1

TABLE II F-4 SOLID STATE POWER CONTROLLERS AND DRIVERS

1 Table Item #	2 Type of Power Controller	3 Rating V & I	4 Associated Loads	5 Duty Cycle	6 Load Power Dissipation	7 P.C. Location	8 Conventional Devices Being Replaced	9 Operational Address	10 Identifier Code	11 Reference Drawings	12 Associated Boolean Equations
092	AC - 1 Pole	V = 115 VAC 60° I = 5A	Pitch and Mech Trim Actuator (20A15) 115VAC 60°				CB8 (5A) LHM C Test/ P-Roll Trim (36A)	11Q11	CFLO92	INSFD Fig. 1 Zone 3A, 67A 69B	092
093	DC - 1 Pole	V = 28VDC I = 5A	Pitch and Mech Trim Actuator (20A15) Clutch/Solenoid 28VDC (J1-4)				CB7 (5A) SPD BK/P Roll Trim Enable (36A3)	11Q12	CFLO93	INSFD Fig. 1 Zone 2B, 85C 86C, 87C, 88C 89B	093
094	DC - 1 Pole	V = 28VDC I = 5A	Pitch and Mech Trim Actuator (20A15) Clutch/Brake Solenoid 27VDC (J1-7)				CB7 (5A) SPD BK/P Roll Trim Enable (36A3)	11Q13	CFLO94	INSFD Fig. 1 Zone 51A, 86C	094
099	Comb, Hyd Press-Normal (Solid State Discrete Driver)	Normal = 28VDC Low = Open	a) External Elec Per Contactor (66A6K3) Discrete b) Pitch Computer Discrete c) Yaw Computer Discrete d) Roll Computer Discrete				CBHO (7.5A) Emerg. Fit Hyd. Auto (36A1) Comb Hyd Press Switch (63S1)	04D14 06D12 06D13	DHL 099	INSFD Fig. 1 Zone 2A, 69C	099
100	Fit Hyd Pres Normal (Solid State Discrete Driver)	Normal = 28VDC Low = Open	a) Pitch Comp. Dis- crete b) Yaw Comp. Dis- crete c) Roll Comp. Dis- crete				Fit Hyd Press Switch (63S2) CBHO (7.5A) Emerg Fit Hyd Auto (36A1)	04D15 06D14 06D15	DHL 100	INSFD Fig. 1 Zone 2A, 69C	100
101	Autopilot Reference Engage (Solid State Discrete Driver)	Engage= 28 VDC Disengage= Open	a) Pitch Comp (20A2) Discrete b) Roll Comp (20A3) Discrete				CB8 (3A) Nose Wheel Steer/APCS (36A3) Auto Pilot Engage - Nosewheel steering Pushbutton Switch (20MA2)	04D16 06D16	GHL 101	INSFD Fig. 1 Zone 2B, 37B 39B, 21C, 11B	101

FIGURE 1 - SHEET 2

TABLE II. P-14 SOLID STATE POWER CONTROLLERS AND DRIVERS

1 Table Item #	2 Type of Power Controller	3 Rating V & I	4 Associated Loads	5 Duty Cycle	6 Load Power Dissipation	7 P.C. Location	8 Conventional Devices Being Replaced	9 Operational Address	10 Identifier Code	11 Reference Drawings	12 Associated Boolean Equations
300	DC - 1 Pole	V = 28VDC	Roll Computer (20A3) Power Supply	100%			CB57 (5A) Roll CMPT DC (36A2)	01Q23	UCL 300	INSPD Fig. 1 Zone 21C, 69B 4C	300
301	DC - 1 Pole	V = 28VDC	Pitch Computer (20A2) (Power Supply)	100%			CB58 (5A) Pitch CMPT DC (36A2)	05Q24	UCL 301	INSPD Fig. 1 Zone 41C, 69B 4C	301
302	Enable Driver	V = 28VDC	a) Pitch Computer (20A2) b) Roll Computer (20A3) (Wing Sweep < 57° Signal)				CB58 (5A) Pitch CMPT DC (36A2) CB57 (5A) Roll CMPT DC (36A2)	04D17 06D18	GEL 302	INSPD Fig. 1 Zone 4C, 72C 21B	302
303	Enable Driver	V = 28VDC	a) Pitch Computer (20A2) b) Roll Computer (20A3) (Flaps > 25° Down Signal)				CB 38 (5A) Pitch CMPT DC (36A2) CB57 (5A) Roll CMPT DC (36A2) Diode "OR" Gate P/O Right Glove Relay Box (772A1)	04D18 06D18	CUL 303	INSPD Fig. 1 Zone 4C, 73C 77A, 83C, 21 41B, 38A	303
304	Enable Driver	V = 28VDC	a) Pitch Computer (20A2) b) Roll Computer (20A3) (DLC Engage Signal)				P/O KGO - Flaps Down Right Glove Relay Box (772A1) CB57 (5A) Roll CMPT DC (36A2)	04D19 06D19	TML 304	INSPD Fig. 1 Zone 21C, 41B 83C, 38A	304
305	AC - 1 Pole	V = 115 VAC @A	Roll Trim Actuator (20A18) 115VAC @A Fixed Phase				P/O K54 - Right Wing Trim P/O K55 - Left Wing Trim CBS - (5A) LPH A Test/ Roll Trim (35A2)	11Q14	CFL 305	INSPD Fig. 1 Zone 4A, 87B, 87C, 88C, 89C, 3A, 41C	305
306	AC - 1 Pole	V = 115 VAC @B	Roll Trim Actuator (20A18) 115VAC @B				P/O K54 - Right Wing Trim (L. Glove Relay Box 773A1) CB 18 (5A) L. PH B Test/ P. Roll Trim (35A4)	11Q15	CFL 306	INSPD Fig. 1 Zone 4A, 87B, 87C, 88C, 89C, 3A, 41C	306

TABLE II P-1b SOLID STATE POWER CONTROLLERS AND DRIVERS

1 Table Item #	2 Type of Power Controller	3 Rating V & I	4 Associated Loads	5 Duty Cycle	6 Load Power Dissipation	7 P.C. Location	8 Conventional Devices Being Replaced	9 Operational Address	10 Identifier Code	11 Reference Drawings	12 Associated Boolean Equations
307	AC - 1 Pole	V = 115VAC I = 1A	Roll Trim Actuator (20A18) 115VAC 50C				CB8 (5A) LPH C Test/ P Roll Trim (35A) (L. Glove Relay Box 773A1)	11Q16	CPI 307	INSPD Fig. 1 Zone 4B, 87B, 87C, 86C, 85C, 3A, 41C	307
308	DC - 1 Pole	V = 28VDC	Roll Trim Actuator (20A18) Clutch/Brake Solenoid 28 VDC				Diodes CR05/CR106 (Left Glove Relay Box 773A1)	11Q17	CPI 308	INSPD Fig. 1 Zone 2A, 85C 86C, 87C, 89A	308
309	Enable Signal	V = 28VDC	Roll, Pitch & Yaw CMPT - Master reset Signal				CB7 (5A) SPD BK P Roll Trim Enable (36A3) CB1 (5A) GND Roll Braking/Spoiler Pos Ind (36A2) CB37 (5A) Roll CMPT DC (36A2) CB38 (5A) Pitch CMPT DC (36A2) CB1 (5A) Gnd Roll Braking/Spoiler Pos. Ind (36A2)	04D20 06D20	UCL 309	INSPD Fig. 1 Zone 4C, 70A 21B, 41C, 61B	309
310	Enable Signal	V = 28VDC	Pitch CMPT (20A2) GND Roll Braking Signal				P/O K29 - M/G Safety N P/O K77 - Gnd Roll Braking No. 2 (R. Glove Relay Box 773A1)	06D21	UCL 310	INSPD Fig. 1 Zone 41C, 83 69A, 70A, 4C 75C, 74C, 2C	310
311	Enable Signal	V = 28VDC	Roll CMPT (20A3) GND Roll Braking Signal				P/O K56 - GND Roll Braking No. 1 P/O K12 - M/G Safety K (R. Glove Relay Box 772A1) CB1 (5A) Gnd Roll Braking/Spoiler Pos. Ind (36A2)	04D21	UCL 311	INSPD Fig. 1 Zone 21B, 83 69A, 70A, 4C 79B, 78B	311

FIGURE 1. SHEET 7

TABLE II. Full Solid State Power Controllers and Drivers

1	2	3	4	5	6	7	8	9	10	11	12
Table Item #	Type of Power Controller	Rating V & I	Associated Loads	Duty Cycle	Load Power Dissipation	P.C. Location	Conventional Devices Being Replaced	Operational Address	Identifier Code	Reference Drawings	Associated Boolean Equations
312	Enable Signal	V = 28VDC	Roll Computer (2043) - Inboard Spoilers - < 180 Signal				P/O - K200 Spoilers Test P/O - K 56 Ground Roll Braking No. 1 (R. Glove Relay Box 772A1) CB37 (5A) Roll CMPTDR DC (3642)	04D22	UCL 312	INSPD Fig. 1 Zone 21C, 83 82, 81A, 76A 74A, 79B, 78B, 69A, 70A, 4C	312
313	Enable Signal	V = 28VDC	Pitch Computer (2042) - Inboard Spoilers - < 180 Signal				P/O - K200 Spoilers Test P/O - K77 Ground Roll Braking No. 2 (L. Glove Relay Box 772A1) CB36 (5A) Pitch CMPTDR DC (3642)	06D22	UCL 313	INSPD Fig. 1 Zone 41B, 75 76, 82, 69A, 70A, 74C, 4C, 2C	313
314	Flag Driver	V = 28VDC	Control Surface Position Indicator (64M) (Right Inboard Spoilers-Up)				CB1 (5) Gnd Roll Braking Spoiler Pos. Ind (3642)	02D01	DLL 314	INSPD Fig. 1 Zone 82C, 75A, 79B, 78B, 4C	314
315	Flag Driver	V = 28VDC	Control Surface Position Indicator (64M) (Left Inboard Spoilers - Up)				CB1 (5A) Gnd Roll Braking Spoiler Pos. Ind (3642)	02D02	DLL 315	INSPD Fig. 1 Zone 82C, 75A, 74A, 4C	315
316	Flag Driver	V = 28 VDC	Control Surface Position Indicator (64M) (Left Inboard Spoilers - Droop)				CB1 (5A) Gnd Roll Braking Spoiler Pos. Ind (3642)	02D03	DLL 316	INSPD Fig. 1 Zone 82C, 25A, 74A, 4C	316
317	Flag Driver	V = 28VDC	Control Surface Position Indicator (64M) (Right Inboard Spoilers - Droop)				CB1 (5A) Gnd Roll Braking Spoiler Pos Ind (3642)	02D04	DLL 317	INSPD Fig. 1 Zone 82C, 79B, 78B, 4C	317



TABLE II. P-14 SOLID STATE POWER CONTROLLERS AND DRIVERS

1 Table Item #	2 Type of Power Controller	3 Rating V & I	4 Associated Loads	5 Duty Cycle	6 Load Power Dissipation	7 P.C. Location	8 Conventional Devices Being Replaced	9 Operational Address	10 Identifier Code	11 Reference Drawings	12 Associated Boolean Equations
318	Flag Driver	V = 28VDC	Control Surface Pos- ition Indicator (6AM) (Left Outboard Spoilers - UP				CB1 (5A) Gnd Roll Brak- ing/Spoiler Pos. Ind (36A2)	02D05	D01318	INSPD Fig. 1 Zone 82C, 76B 75B, 4C	318
319	Flag Driver	V = 28VDC	Control Surface Pos- ition Indicator (6AM) (Left Outboard Spoilers - Droop				CB1 (5A) Gnd Roll Brak- ing/Spoiler Pos. Ind (36A2)	02D06	D01319	INSPD Fig. 1 Zone 82C, 76B 75B, 4C	319
320	Flag Driver	V = 28VDC	Control Surface Pos- ition Indicator (6AM) (Right Outboard Spoilers - UP				CB1 (5A) Gnd Roll Brak- ing/Spoiler Pos. Ind (36A2)	02D07	D01320	INSPD Fig. 1 Zone 82C, 76C 75C, 4C	320
321	Flag Driver	V = 28VDC	Control Surface Pos- ition Indicator (6AM) (Right Outboard Spoilers - Droop)				CB1 (5A) Gnd Roll Brak- ing/Spoiler Pos. Ind (36A2)	02D08	D01321	INSPD Fig. 1 Zone 82C, 76C 75C, 4C	321

TABLE III F-14 SUSTEL BOOLEAN EQUATIONS

FIGURE 1 SHEET 1

1 Table Item #	2 Boolean Equation	3 Transducer List Cross Reference	4 Solid State Controller List Cross Reference	5 Bus/Load Management Priority	6 Special Considerations	7 Reference Drawings	8 Equation Description & Notes
001	CFLO01	NA	001	2	Ess. No. 2 Bus	INSPD Fig. 1 Zone 3A, 2A	Mech Trim AC = 115 VAC $\phi$ Essential #2 Bus Energized
002	CFLO02	NA	002	2	Flight Critical Ess. No. 2 Bus	INSPD Fig. 1 Zone 2A, 6/A	Rudder Authority Control Actuator Fixed $\phi$ and Roll Authority Control Actuator Fixed $\phi$ = 115 VAC $\phi$ Essential #2 BUS Energized
003	UCL003	NA	003	2	Ess. No. 2 Bus	INSPD Fig. 1 Zone 4/C	Pitch Computer 115VAC $\phi$ A Essential #2 BUS Energized
004	UCL004	NA	004	2	Ess. No. 2 Bus	INSPD Fig. 1 Zone 4/C	Pitch Computer 115 VAC $\phi$ A Auto Pitch Drive Trim = 115 VAC $\phi$ A Essential #2 BUS Energized
005	UCL005	NA	005	2	Ess. No. 2 Bus	INSPD Fig. 1 Zone 6/C, 2B	Yaw SAS Computer "A" Power Supply 115 VAC $\phi$ A = 115 VAC $\phi$ A Essential #2 BUS Energized
006	UCL006	NA	006	2	Flight Critical Ess. No. 2 Bus	INSPD Fig. 1 Zone 6/C, 2B	Yaw SAS Computer "B" Power Supply 115 VAC $\phi$ A = 115 VAC $\phi$ A Essential #2 BUS Energized
007	UCL007	NA	007	2		INSPD Fig. 1 Zone 6/C, 2B	Yaw SAS Computer "B" Power Supply 115 VAC $\phi$ A = 115 VAC $\phi$ A Essential #2 BUS Energized
008	UCL008	NA	008	2	Ess. No. 2 Bus	INSPD Fig. 1 Zone 2/C	Roll Computer 115VAC $\phi$ A = 115 VAC $\phi$ A Essential #2 BUS Energized
009	CKLO09 = CKS001	001	009	2	Ess. No. 2 Bus	INSPD Fig. 1 Zone 73A, 75A, 77B, 79B	#1 Left, #2 Left, #1 Right, #2 Right; Spoiler Actuator Solenoid Operated Relief Valve is energized if the wing sweep is less than 65°.
010	CKLO10 = CKS001	001	010	3	R. Main Bus	INSPD Fig. 1 Zone 74C, 75C 74B, 75B	#3 Left, #4 Left, #3 Right, #4 Right; Spoiler Actua- tor Solenoid operated relief valve is energized if the wing sweep is less than 65°.
011	UCL011	NA	011	2	Ess. No. Bus	INSPD Fig. 1 Zone 2/C, 3A	Roll Computer Mech Trim 28 VDC = 28 VDC Essential #2 BUS Energized
012	UCL012	NA	012	2	AFCS Bus	INSPD Fig. 1 Zone 6/C, 3B	Yaw SAS Computer "A" Power Supply = 28 VDC AFCS BUS Energized
013	UCL013	NA	013	2	AFCS Bus	INSPD Fig. 1 Zone 6/C, 3C	Yaw SAS Computer "B" Power Supply = 28 VDC AFCS BUS Energized
014	UCL014	NA	014	2	Flight Critical Ess. No. 2 Bus	INSPD Fig. 1	Yaw Computer Roll Authority 28 VDC and Adder Authority 28 VDC = 28 VDC Essential #2 BUS Energized

TABLE III. F-14 SUGTEL BOOLEAN EQUATIONS

FIGURE 1 SHEET 2

1 Table Item #	2 Boolean Equation	3 Transducer List Cross Reference	4 Solid State Controller List Cross Reference	5 Bus/Load Management Priority	6 Special Considerations	7 Reference Drawings	8 Equation Description & Notes
015	UCL015	NA	015	2	AFCS Bus	INSPD Fig. 1 Zone 61C	Yaw SAS Computer "M" Power Supply if the 26 VDC AFCS BUS is energized
016	UCL016 = CJS002 + CJS102	002 102	016	2	AFCS Bus	INSPD Fig. 1 Zone 21C, 41B	Roll, Yaw & Pitch SAS Computer 26 VDC WOR Signal = LMG Wright on Wheels and R. M/G Height on Wheels
017	UCL017	NA	017	2	NAV. Bus	INSPD Fig. 1 Cone 21A	Roll SAS Computer INS 26 VAC 6A Reference and INS 26 VAC 6A and CSDC 26 VAC 6A are on if the 26VAC 6A Navigation BUS is Energized
086	CJL086 = CJS021 + CJS022	021 022	086	2	* See Note 1 Ess. No. 2 Bus	INSPD Fig. 1 Zone 3B, 65A, 93B	Rudder Trim Actuator 115 VAC 6A = Rudder Trim Switch Left or Right
087	CJL087 = CJS021	021	087	2	* See Note 1 ** See Note 2 Ess. No. 2 Bus	INSPD Fig. 1 Zone 3B, 65A, 93B	Rudder Trim Actuator 115 VAC 6B = Rudder Trim Switch Left
088	CJL088 = CJS022	022	088	2	* See Note 1 ** See Note 2 Ess. No. 2 Bus	INSPD Fig. 1 Zone 3A, 65B, 93B	Rudder Trim Actuator 115 VAC 6C = Rudder Trim Switch Right
089	CJL089 = CJS021 + CJS022	021 022	089	2	* See Note 1 Ess. No. 2 Bus	INSPD Fig. 1 Zone 4B, 65B, 93B	Rudder Trim Actuator 26 VDC Clutch/Brake Solenoid = Rudder Trim Switch Left or Right  * Note 1 These controllers must be actuated & deactivated "Simultaneously" (similar to multi-pole relay function)  ** Note 2 These controllers must be wire or'ed at outputs (equivalent to SFTCO relay function)

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TABLE III. P-14 SUSTEL BOOLEAN EQUATIONS

1 Table Item #	2 Boolean Equation	3 Transducer List Cross Reference	4 Solid State Controller List Cross Reference	5 Bus/Load Management Priority	6 Special Considerations	7 Reference Drawings	8 Equation Description & Notes
090	$CFL090 = \overline{CFS025} \cdot$ $(CFS024 + CFS023)$	025 024 023	090	2	* See Note 3 Eas. No. 2 Bus	INSFD Fig. 1 Zone 93B, 87, 86C, 85C, 3B	Pitch and Mech Trim Actuator 115 VAC 4A = Attitude Hold Selected NOT and Trim Switch down or up
091	$CFL091 = \overline{CFS025} \cdot$ $CFS023$	025 023	091	2	* See Note 3 ** See Note 4 Eas. No. 2 Bus	INSFD Fig. 1 Zone 93B, 87, 86C, 85C, 3A	Pitch and Mech Trim Actuator 115 VAC 4B = Attitude Hold Selected NOT and Trim Switch up
092	$CFL092 = \overline{CFS025} \cdot$ $CFS024$	025 024	092	2	* See Note 3 ** See Note 4 Eas. No. 2 Bus	INSFD Fig. 1 Zone 93B, 87, 86C, 85C, 3A	Pitch and Mech Trim Actuator 115 VAC 4C = Attitude Hold Selected NOT and Trim Switch Down
093	$CFL093 = \overline{CFS025} \cdot$ $(CFS024 + CFS023)$	025 024 023	093	2	* See Note 3 *** See Note 5 Eas. No. 2 Bus	INSFD Fig. 1 Zone 93B, 87, 86C, 85C, 2A	Pitch and Mech Trim Actuator Clutch/Brake Solenoid 28VDC = Attitude Hold Selected NOT and Trim Switch down or up
094	$CFL094 = CFS025$	025	094	2	*** See Note 5 Eas. No. 2 Bus	INSFD Fig. 1 Zone 91A, 86C	Pitch and Mech Trim Actuator Clutch/Brake Solenoid 28VDC = Attitude Hold Selected
099	$DHL099 = DHL031$	031	099	1	Solid State Dis- crete Driver Rather than SSFC Eas. No. 2 Bus	INSFD Fig. 1 Zone 2A, 69C	Comb Hyd Press Normal 28VDC Discrete to the a) External Electrical Hyr Contactor (6646K3) b) Pitch Computer (2042) c) Yaw Computer (2041) d) Roll Computer (2043) IS = Comb. Hyd Press. Switch Normal (-2100 PSI)
<p>* Note 3 These controllers must be actuated and Deactuated "simultaneously" (similar to Multi-Pole Relay Function)</p> <p>** Note 4 These controllers must be wire or'ed at outputs (equivalent to SHUTO relay function)</p> <p>*** Note 5 There are two (2) Clutch/Brake Functions</p>							

TABLE III. F-14 SATEL BOOLEAN EQUATIONS

1 Table Item #	2 Boolean Equation	3 Transducer List Cross Reference	4 Solid State Controller List Cross Reference	5 Bus/Load Management Priority	6 Special Considerations	7 Reference Drawings	8 Equation Description & Notes
100	DHL100 = DHS032	032	100	1	Solid State Discrete Driver Rather than SSR Eas. No. 1 Bus	WSPD Fig. 1 Zone 2A, 69C	Fit Hyd Press Normal 28VDC Discrete to the a) Pitch Comp. (2042) b) Yaw Comp. (2043) c) Roll Comp. (2043) IS = Fit Hyd Press. Switch Normal (-2100 PSI)
101	GHL101 = GHS032 + GHS102	033 002 102	101	2	Solid State Discrete Driver Rather than SSR Eas. No. 1 Bus	WSPD Fig. 1 Zone 2B, 37B 39H, 21C, 41B	Autopilot Reference Engage 28VDC Discrete to the a) Pitch Comp. (2042) b) Yaw Comp. (2043) c) Roll Comp. (2043) IS = Autopilot reference engage switch - Engaged and L MLG Weight on Wheels NOT or R MLG Weight on Wheels NOT



TABLE III F-14 SUSTEL BOOLEAN EQUATIONS

1 Table Item #	2 Boolean Equation	3 Transducer List Cross Reference	4 Solid State Controller List Cross Reference	5 Bus/Load Management Priority	6 Special Considerations	7 Reference Drawings	8 Equation Description & Notes
300	UCT300	N/A	300	2	AFCS Bus	IMSFD Fig. 1 Zone 21C, 4C, 69B	Roll Computer (20A3) Power Supply 28VDC = 28VDC AFCS BUS Energized
301	URT301	N/A	301	2	AFCS Bus	IMSFD Fig. 1 Zone 41C, 4C 69B	Pitch Computer (20A2) Power Supply 28VDC = 28VDC AFCS BUS Energized
302	GEL302 = GSE216	216	302	2	Flight Critical Requires Two Sensors for GSE216 AFCS Bus	IMSFD Fig. 1 Zone 4C, 72C 21B, 41C	Pitch Computer (20A2) and Roll Computer (20A3) - Wing Sweep - < 57°
303	CGI403 = CGS217 + CGS218	217 218	303	2		IMSFD Fig. 1 Zone 4C, 73C 77A, 89C, 21C 41B, 36A	Pitch Computer (20A2) and Roll Computer (20A3) - Flaps 25° Down = Left or Right Flaps ± 25° down
304	TN304 = TRS219 • (CGS217 + CGS218)	217 218 219	304	2	AFCS Bus	IMSFD Fig. 1 Zone 21C, 41B 83C, 36A	Pitch Computer (20A2) and Roll Computer (20A3) - DLC Engage = DLC engage Chaff Dispense - on and left or right flaps ± 25° down
305	CFI305 = (CFR220 + CFR221) • CFS025	Q25 220 221	305	2	Ess. No. 2 Bus	IMSFD Fig. 1 Zone 89A, 87, 86C, 86C, 41C, 19C, 4B, 3A	Roll Trim Actuator 115VAC 6A = (Left or right trim) and Attitude Hold Selected NOT
306	CFI306 = CFR221 • CFS025	Q25 221	306	2	Ess. No. 2 Bus	IMSFD Fig. 1 Zone 89A, 87, 86C, 86C, 41C, 19C, 4B, 3A	Roll Trim Actuator 115VAC 6A = Right - Trim and Attitude Hold Selected NOT
307	CFI307 = CFR220 • CFS025	Q25 220	307	2	Ess. No. 2 Bus	IMSFD Fig. 1 Zone 89A, 87, 86C, 89C, 41C, 19C, 4B, 3A	Roll Trim Actuator 115VAC 6A = Left Trim and Attitude Hold Selected NOT
308	CFI308 = (CFR220 + CFR221) • CFS025	Q25 220 221	308	2	Ess. No. 2 Bus	IMSFD Fig. 1 Zone 2A, 89C, 86C, 87C, 89A	Roll Trim Actuator - Clutch/Brake Solenoid 28VDC = (Left or Right Trim) and Attitude Hold Selected NOT

TABLE III F-14 SUSTAIN BOOLEAN EQUATIONS

1	2	3	4	5	6	7	8
Table Item #	Boolean Equation	Transducer List Cross Reference	Solid State Controller List Cross Reference	Bus/Load Management Priority	Special Considerations	Reference Drawings	Equation Description & Notes
309	$UCL309 = UCL222$	222	309	2	AFCS Bus	INSTD Fig. 1 Zone 4C, 70A, 21B, 41C, 61B	Pitch, Yaw and Roll Computer - Master Reset = Master Reset - Depressed
310	$UCL310 = A + A(t) \cdot B(t) \cdot \bar{A}(t+)$	0X2 102 198 200 201 223 224 225	310	2	a) Requires Latching Function b) Flight Critical Parameter, Requires Separate Transducers and Equation Solutions Relative to Equation 311 c) Ess. No. 2 Bus	INSTD Fig. 1 Zone 41C, 83, 69A, 70A, 4C, 75C, 74C, 2C	A = QK201 • QK200 • GBS002 • GBS102 • (CDS223 + GBS198) B = CDS224 + CDS225 Ground Roll Braking Signal to the Pitch Computer - Right and Left Throttle - Idle and left and right MG - Weight on Wheels and (Anti Skid/Spoiler Brake Switch in the Spoiler ON or both Positions) Or if the above terms are true while the No. 4 right and No. 3 right spoilers are > 0° the above terms may subsequently become false.
311	$UCL311 = A + A(t) \cdot B(t) \cdot \bar{A}(t+)$	0X2 102 198 200 201 223 226 227	311	2	a) Requires Latching Function b) Flight Critical Parameter, requires Separate Transducers and Equation Solutions relative to Equation 310 c) Ess. No. 2 Bus		A = QK201 • QK200 • GBS002 • GBS102 • (CDS223 + GBS198) B = CDS226 + CDS227 Ground Roll Braking Signal to the Roll Computer - Right and Left Throttle - Idle and left and right MG-Weight on Wheels and (Anti Skid/Spoiler Brake Switch in the - Spoiler ON or both Position) or If the above terms are true while the No. 2 right and No. 1 Right Spoilers are > 0° the above terms may subsequently become false.
312	$UCL312 = [(CDS232 \cdot CDS229 \cdot CDS228) + (CDS233 \cdot CDS241 \cdot CDS240)] \cdot [(CDS234 \cdot M8068) \cdot UCL311]$	0X2 065 102 198 200 201 223 226 227 228 229 230 231 232 233 234	312	2	Flight Critical - Requires Separate Transducers and Equation Solutions Relative to Equation 313 AFCS Bus	INSTD Fig. 1 Zone 21C, 83, 82, 81A, 76A, 71A, 79B, 76B, 69A, 70A, 4C	Roll Computer - Inboard Spoiler less than 100 Signal = (Left Stick/Normal and No. 2 Left Spoiler - < 180°) or (Right Stick/Normal and No. 2 Right Spoiler - < 18°) or [(Master Test - Stick SW not or Master Test - Not depressed) and the conditions for equation 311 are true]

TABLE III F-14 SUSTEL BOOLEAN EQUATIONS

1 Table Item #	2 Boolean Equation	3 Transducer List Cross Reference	4 Solid State Controller List Cross Reference	5 Bus/Load Management Priority	6 Special Considerations	7 Reference Drawings	8 Equation Description & Notes
313	DL1313 = (CS2242 • CS2275 • (CS2243) • (CS2233 • CS2237 • CS2248)) + (CS2231 • MS2287) • DL1310	002 006 102 108 198 200 201 223 224 225 232 233 234 235 236 237 238	313	2	Flight Critical Requires Separate Transducer Solution Relative to Equa- tion 312 AFCS Bus	INSPD Fig. 1 Zone 1A, 75, 76, 77, 78A, 78B, 74C, 4C, 2A	Pitch Computer - Outboard Spoiler less than 180 Signal = (Left Stick/Normal No. 3 and No. 4 Left Spoilers < 180) OR (Right Stick/Normal No. 3 and No. 4 Right Spoilers < 180) OR (Water Test - Stick SA not or Water Test - not depressed) and the Conditions for Equation 310 are true
314	DL1314 = CS2226 + CS2227	226 227	314	2	Ess. No. 2 Bus	INSPD Fig. 1 Zone 22C, 79B, 78B, 4C	Right Inboard Position Indicator Flag-Up = No. 2 or No. 1 Right Spoilers - > 0°
315	DL1315 = CS2240 + CS2239	239 240	315	2	Ess. No. 2 Bus	INSPD Fig. 1 Zone 22C, 75A, 74A, 4C	Left Inboard Position Indicator Flag-Up = No. 1 or No. 2 Left Inboard Spoilers - > 0°
316	DL1316 = CS2242 • CS2241	241 242	316	2	Ess. No. 2 Bus	INSPD Fig. 1 Zone 22C, 75A, 74A, 4C	Left Inboard Position Indicator Flag-Droop = No. 1 and No. 2 Left Inboard Spoilers - (-4.5°)
317	DL1317 = CS2243 • CS2244	243 244	317	2	Ess. No. 2 Bus	INSPD Fig. 1 Zone 22C, 79B, 78B, 4C	Right Inboard Position Indicator Flag-Droop = No. 1 and No. 2 Right Inboard Spoilers - (-4.5°)
318	DL1318 = CS2245 + CS2246	245 246	318	2	Ess. No. 2 Bus	INSPD Fig. 1 Zone 22C, 76B 75B, 4C	Left Outboard Position Indicator Flag-Up = No. 3 or No. 4 Left Outboard Spoilers - > 0°
319	DL1319 = CS2247 • CS2248	247 248	319	2	Ess. No. 2 Bus	INSPD Fig. 1 Zone 22C, 76B 75B, 4C	Left Outboard Position Indicator Flag-Droop = No. 3 and No. 4 Left Outboard Spoilers - (-4.5°)

TABLE III F-14 SATEL BOOLEAN EQUATIONS

1 Table Item #	2 Boolean Equation	3 Transducer List Cross Reference	4 Solid State Controller List Cross Reference	5 Bus/Load Management Priority	6 Special Considerations	7 Reference Drawings	8 Equation Description & Notes
320	DL320 = COS225 + COS224	224 225	320	2	Eas. No. 2 Bus	IMSFD Fig. 1 Zone 220, 760, 750, 40	Right Outboard Position Indicator Flag-1p = No. 3 or No. 4 Right Spoilers - > 0°
321	DL321 = COS 249 COS 250	249 250	321	2	Eas. No. 2 Bus	IMSFD Fig. 1 Zone 220, 760, 750,	Right Outboard Position Indicator Flag-1p = No. 3 and No. 4 Right Spoilers - (.4, 50)

TABLE 1. F-14 SUSTEL SIGNAL TRANSDUCERS

FIGURE 2. SHEET 1.

1 Table Item #	2 Signal Name/Function	3 Identifier Code	4 Signal Source Box Identification	5 Point of Origin	6 Transducer Type	7 Present Signal Characteristics	8 Associated Loads	9 Conventional Switches Being Replaced or Deleted	10 Operational Address	11 Reference Drawings	12 Associated Boolean Equation	13 Conditioning Technique
003	Right Main AC Per-on-Line	XAS003	AC Power Contactor Assy (66A662)	Port PS 360	N/A	Open or Switched 28VDC	R2 APX76/ BAUCS/ K3 LAUCS/ CAUC INTLK (ART CRPT Relay Box 793A1)	N/A	03P02	INSTR Fig. 2 Zone 1A	019 735 029 196 030 517 062 518 063 546 270	Resistor Divider Adapter
004	Left Main AC Per-on-Line	XAS004	AC Per Contactor Assy (66A661)	Port PS 360	N/A	Open or Switched 28VDC	R2 APX76/ BAUCS/ K3 LAUCS/ CAUC INTLK (ART CRPT Relay Box 793A1)	N/A	03P03	INSTR Fig. 2 Zone 2A	019 735 029 196 030 517 062 518 063 549 270	Resistor Divider Adapter
005	Ground Cooling Pressure Inter- lock Switch - High	HMS 005	Ground Cooling Pressure Interlock Switch (55S2)	Starboard PS410	Air Pressure Switch Pressure Hi/Low	Open or switched 28 VDC	R2 APX76/ BAUCS/ K3 LAUCS/ CAUC INTLK (ART CRPT Relay Box 793A1)	Ground Cooling Pres- sure Interlock Switch (55S2)	04P01	INSTR Fig. 2 Zone 2A	019 063 029 517 030 518 062	Solid State
006	Horizontal Tail Authority Switch - Open	CFS026	Horizontal Tail Authority Stop Switch (50S1)	STW735 W1164	Limit Switch	Open = 28VDC Open = No Volt- age		Horizontal Tail Au- thority Stop Switch (50S1)	06P19	INSTR Fig. 2 Zone 3B	095 098 096 543	Solid State
007	Wing Sweep Handle Position Switch - Raised 2.5 Inches	CFS027	Throttle Quadrant (711A1)	Pilots Left Side Control PS225	Limit Switch	Raised 2.5 Inches = 28VDC Lowered = Open		Wing Sweep Handle Position Switch	01P06	INSTR Fig. 2 Zone 20	095 098 096 542 097 543	Resistor Divider Adapter
008	Horizontal Tail Restrict- ed	CFS028	Horizontal Tail Restricted Author- ity Switch (50S2)	PS735 W1164	Limit Switch	Restricted = 28VDC Unrestricted = Open		Horizontal Tail Re- stricted Authority Switch (50S2)	06P20	INSTR Fig. 2 Zone 37B	095 098 097 543	Solid State



FIGURE 2 SHEET 2

TABLE I. F-14 SIGTEL SIGNAL TRANSDUCERS

1 Table Item #	2 Signal Name/Function	3 Identifier Code	4 Signal Source Box Identification	5 Point of Origin	6 Transducer Type	7 Present Signal Characteristics	8 Associated Loads	9 Conventional Switches Being Replaced or Deleted	10 Operational Address	11 Reference Drawings	12 Associated Boolean Equation	13 Conditioning Technique
029	Aft Stick Authority Switch-Reduced Authority	CFS029	Aft Stick Authority Switch (50S3)	STW735 WL164	Limit Switch	Reduced Authority = 28VDC Pull Authority = Open		Aft Stick Authority Switch (50S5)	06P21	INSFD Fig. 2 Zone 38B	095 098 097 543	Solid State
030	Wing Sweep Handle Position Switch - < 68°	CKS030	Throttle Quadrant (711A1)	Pilots Left Side Console FS225	Limit Switch	< 68° = 28VDC > 68° = Open		Wing Sweep Handle Position Switch	01P07	INSFD Fig. 2 Zone 20B	095 098 097 543	Resistor Divider Adapter
071	Wing Sweep (Test Selector Position)	CKS071	Sys Test -Sys Pwr Panel (790A1)	WFO's Left Knee Panel FS300	11 Position Rotary Switch	Switched 28VDC	K2 Wing Sweep Relay in Sys Test- Panel (790A1)		03P04	INSFD Fig. 2 Zone 39B	117 118	Solid State
072	Flap Interlock Disengaged	CKS072	Wing Sweep/Flap and Slat Control Box (50A2)	FS40 WL175	Solenoid Driver Con- tactors	Flap Interlock Disengaged = 28VDC Flap Interlock Disengaged=Open	Same as Item 045	NA	05P02	INSFD Fig. 2 Zone 26A	114	Resistor Divider Adapter

TABLE I. P-14 SOSTEL SIGNAL TRANSDUCERS

1 Table Item #	2 Signal Name/Function	3 Identifier Code	4 Signal Source Box Identification	5 Point of Origin	6 Transducer Type	7 Present Signal Characteristics	8 Associated Loads	9 Conventional Switches Being Replaced or Deleted	10 Operational Address	11 Reference Drawings	12 Associated Boolean Equation	13 Conditioning Technique
034	Left Aux Flap Retract Switch - RETRACT	CNS034	P/O Left Aux Flap Retract Switch (51S17)	Left Wing Art. FS570 BL160	Limit Switch	Retract = 28VDC Extend = Open	Aux Flap Solenoid K68 (Left Glove Relay Box 773A1)	Left Aux Flap Re- tract Switch (51S17)	05P03	INSFD Fig. 2 Zone 32C	102	Solid State
035	Right Aux Flap Retract Switch - RETRACT	CNS035	P/O Right Aux Flap Retract Switch (51S18)	Right Wing Art. FS570 BL160	Limit Switch	Retract = 28VDC Extend = Open	Same as Above (034)	Right Aux Flap Re- tract Switch (51S18)	07P15	INSFD Fig. 2 Zone 34A	102	Solid State
036	Flap Handle - < 6°	CNS036	Flap 6° Switch (51S19)	Pilots Cockpit FS225	Limit Switch	< 6° = 28VDC > 6° = Open	Same as Above (034)	Flap 6° Switch (51S19)	01P08	INSFD Fig. 2 Zone 33A	102 103	Solid State
037	Left Slat Asymmetry Switch-Closed	CNS037	Left Slat Asymmetry Switch (51S7)	Left Out- board Drive Wing Slat Shaft, Left Wing Forward FS570 BL340	Rotary Limit Switch	Closed = 28VDC Open = 28VDC Not	a) K86 Flap/ Slat Lockout Relay (Left Glove Relay Box 773A1) b) Disable Flap-Slat Drive (28VDC) Drive and (Flap and Slat Sym- metry Valve 311) Valve 311)	Left Slat Asymmetry Switch (51S7)	05P04	INSFD Fig. 2 Zone 29A, 39A	104 105	Solid State
038	Right Slat Asymmetry Switch - Closed	CNS038	Right Slat Asymmetry Switch (51S8)	Right Out- board Drive Wing Slat Shaft, Right Wing Forward FS570 BL340	Rotary Limit Switch	Closed = 28VDC Open = 28VDC Not	Same as Above (037)	Right Slat Asymmetry Switch (51S8)	07P16	INSFD Fig. 2 Zone 37A, 31A	104 105	Solid State

FIGURE 2 SHEET 4

TABLE I F-14 SUGTEL SIGNAL TRANSDUCERS

1 Table Item #	2 Signal Name/Function	3 Identifier Code	4 Signal Source Box Identification	5 Point of Origin	6 Transducer Type	7 Present Signal Characteristics	8 Associated Loads	9 Conventional Switches Being Replaced or Deleted	10 Operational Address	11 Reference Drawings	12 Associated Boolean Equation	13 Conditioning Technique
039	Left Flap Asymmetry Switch - Closed	CKS039	Left Flap Asymmetry Switch (5185)	Left Outboard Wing Flap Drive Shaft Left Wing Aft FS570 BL320	Rotary Limit Switch	Closed = 28VDC Open = 28VDC Not	Same as Above (037)	Left Outboard Asymmetry Switch (5185)	05P05	IWSFD Fig.2 Zone 29B, 40A	104 105	Solid State
040	Right Flap Asymmetry Switch - Closed	CKS040	Right Flap Asymmetry Switch (5186)	Right Outboard Wing Flap Drive Shaft FS625 BL320	Rotary Limit Switch	Closed = 28VDC Open = 28VDC Not	Same as Above (037)	Right Flap Asymmetry Switch (5186)	07P17	IWSFD Fig.2 Zone 30A, 31B	104 105	Solid State
041	Right Flap Overtravel Up Switch - Closed	CKS041	Right Flap Overtravel Up Switch (51813)	Right Wing Maneuver Flap Actuator #1 FS615 BL200	Limit Switch	Closed = 28VDC Open = 28VDC Not	Same as Above (037)	Right Flap Overtravel Up Switch (51813)	07P18	IWSFD Fig.2 Zone 37B, 31B	104 105	Solid State
042	Right Flap Overtravel Down Switch - Closed	CKS042	Right Flap Overtravel Down Switch (51814)	Right Wing Maneuver Flap Actuator #1 FS615 BL200	Limit Switch	Closed = 28VDC Open = 28VDC Not	Same as Above (037)	Right Flap Overtravel Down Switch (51814)	07P19	IWSFD Fig.2 Zone 37B, 31B	104 105	Solid State
043	Left Flap Overtravel Up Switch - Closed	CKS043	Left Flap Overtravel Up Switch (51825)	Left Wing Maneuver Flap Actuator #1 FS615 BL200	Limit Switch	Closed = 28VDC Open = 28VDC Not	Same as Above (037)	Left Flap Overtravel Up Switch (51825)	06J22	IWSFD Fig.2 Zone 40A, 29B	104 105	Solid State

FIGURE 2 SHEET 5

TABLE 1 F-14 SATEL SIGNAL TRANSDUCERS

1 Table Item #	2 Signal Name/Function	3 Identifier Code	4 Signal Source Box Identification	5 Point of Origin	6 Transducer Type	7 Present Signal Characteristics	8 Associated Loads	9 Conventional Switches Being Replaced or Deleted	10 Operational Address	11 Reference Drawings	12 Associated Boolean Equation	13 Conditioning Technique
044	Left Flap Overtravel Down Switch - Closed	CKS044	Left Flap Over- travel Down Switch (51S16)	Left Wing Flap Actuator #1 FS615 BL200	Limit Switch	Closed = 28VDC Open = 28VDC Not	Same as Above (037)	Left Flap Overtravel Down Switch (51S16)	06P23	INSPD Fig.2 Zone 408, 29B	104 105	Solid State
045	Wing Sweep Switch - 20°	CKS045	F/O Wing Sweep Switch (51A5)	FS 540 ML175	Cam Driven Limit Switch	20° = 28VDC > 20° = Open	K2's Aux Flap Control (Left Glove Relay Box 773A1)	Wing Sweep Switch (51A5)	05P6	INSPD Fig.2 Zone 248, 26A	105	Solid State
046	Flap Handle - > 5°	CKS046	Flap Handle Posi- tion Switch (P/O Throttle Quadrant 711A1)	Pilots Left Side Console FS225	Handle Limit Switch	> 5° = 28VDC < 5° = Open	Same as Above (045)	Flap Handle Position Switch (P/O Throttle Quadrant 711A1)	01P09	INSPD Fig.2 Zone 20A, B	105	Resistor Divider Adapter
047	Flap Interlock Engaged	CKS047	Wing Sweep/Flap and Slat Control Box (50A2)	FS540 ML175	Solenoid Driven Con- tacts	Flap Interlock Engaged = 28VDC Flap Interlock Engaged Not = Open	Same as Above (045)	NA	05P07	INSPD Fig.2 Zone 26A	105 117	Resistor Divider Adapter

FIGURE 2. SHEET 1

TABLE II. F-14 SOLID STATE POWER CONTROLLERS AND DRIVERS

1 Table Item #	2 Type of Power Controller	3 Rating V & I	4 Associated Loads	5 Duty Cycle	6 Load Power Dissipation	7 P.C. Location	8 Conventional Devices Being Replaced	9 Operational Address	10 Identifier Code	11 Reference Drawings	12 Associated Boolean Equations
018	DC - 1 Pole	V = 28VDC I = 5 AMP	Ming Flap Glove Valve Controller Test 28VDC	100%			CB27 (5 AMP) R DC Test AM Bit (364)	05Q26	CU1018	INSPD Fig. 2 Zone 17C	018
019	AC - 1 Pole	V = 115VAC I = 5 AMP	ADC 115 VAC 4A	100%			CB5 (5 AMP) CALC (3546) (115 VAC) CB55 (5 AMP) Ground Per Cooling Intlk (28 VDC) (364) K3 LALCS/CALC Intlk (ATC Cockpit Relay Box (95A1)) K2 APT6/VALCS (ATC Cockpit Relay Box (95A1))	02Q04	CU1019	INSPD Fig. 2 Zone A1, A2, 9C	019
020	AC - 1 Pole	V = 115VAC I = 5 AMP	Ming Flap Glove Valve Controller (50A5) Flap 115 VAC 4C	100%			CB15 (5A) 115 VAC 4C Glove Valve Contr (3546)	05Q27	CU1020	INSPD Fig. 2 Zone 17C	020
021	AC - 1 Pole	V = 115VAC I = 3 AMP	Ming Flap Glove Valve Controller (50A5)	100%			CB13 (3A) Ming Sweep Drive #1 (3546)	05Q28	CU1021	INSPD Fig. 2 Zone 17C	021
022	AC - 1 Pole	V = 115VAC I = 3 AMP	Ming Sweep #1 Per Supply 115 VAC 4C Ming Flap Glove Valve Controller (50A5)	100%			CB11 (3A) Ming Sweep Drive #2 MAINV CONTR (3546)	05Q29	CU1022	INSPD Fig. 2 Zone 17C	022
023	AC - 1 Pole	V = 115VAC I = 3A	Sweep Indicator 4B (50A6) Per Supply #1 & #2	100%			CB23 (3A) Ming Box, Ind. AC (3542)	07Q04	CU1023	INSPD Fig. 2 Zone 21C	023
024	AC - 1 Pole	V = 115VAC I = 5A	Angle of Attack Filter (5545)	100%			CB20 (5A) Angle of Attack Ind. AC (3542)	07Q05	CU1024	INSPD Fig. 2 Zone 8B	024



TABLE II. F-14 SOLID STATE POWER CONTROLLERS AND DRIVERS

1 Table Item #	2 Type of Power Controller	3 Rating V & I	4 Associated Loads	5 Duty Cycle	6 Load Power Dissipation	7 P.C. Location	8 Conventional Devices Being Replaced	9 Operational Address	10 Identifier Code	11 Reference Drawings	12 Associated Boolean Equations
025	AC - 1 Pole	V = 115VAC φB I = 5A	a) Wheel - Flaps Position Indicator (70M) Flaps Position In- dicator b) Flap Position Transmitter (70M) c) Control Surface Position Indicator (64M) d) Right Rudder Position Transmitter (64B) e) Left Rudder Position Transmitter (64B) f) Right Horizontal Stabilizer Position Transmitter (64B) g) Left Horizontal Stabilizer Position Transmitter (64B)				CB1's (5A) Tail/Rudder/ Flap Ind. (3542)	09402 03001	CEL025	1WSFD Fig. 2 Zone 30B, 30A  1WSFD Fig. 1 Zone 95C, 95A, 95B, 96C	025
095	AC - 1 Pole	V = 115VAC φA I = 5A	Wing Oversweep Actuator (5047) 115 VAC φA				02E (7.5A) Wing Pos Ind. IC (3042) RG2 MG Safety "Q" Left Glove Relay Box	11Q25	CEL095	1WSFD Fig. 2 Zone 1C, 2B, 2C, 3C, 3B, 37C, 35B, 20B	095
096	AC - 1 Pole	V = 115VAC φB I = 5A	Wing Oversweep Actuator (5047) 115VAC φB				RG4 Motor Retract Left Glove Relay Box	11Q26	CEL096	Same as Above	096
097	AC - 1 Pole	V = 115VAC φC I = 5A	Wing Oversweep Actuator (5047) 115VAC φC				RG3 Motor Extend Left Glove Relay Box Horizontal Tail Author- ity Stop Switch (5081)	11Q27	CEL097	Same as Above	097

TABLE II. P-14 SOLID STATE POWER CONTROLLERS AND DRIVERS

1 Table Item #	2 Type of Power Controller	3 Rating V & I	4 Associated Loads	5 Duty Cycle	6 Load Power Dissipation	7 P.C. Location	8 Conventional Devices Being Replaced	9 Operational Address	10 Identifier Code	11 Reference Drawings	12 Associated Boolean Equations
098	DC - 1 Pole	V = 28VDC I = 7.5A	Wing Oversweep Actuator (50A7) Clutch/Brake Solenoid 28VDC				Horizontal Tail Restricted Authority Switch (5082) Art Stick Authority Switch (5053) K12 MIG Safety "K" Throttle Quadrant (711A1) Wing Sweep Handle Position Switch < 68° and raised 2.5 inches	11Q28	CEL008	Same as Above	098
102	DC - 1 Pole	V = 28VDC	20° Aux Flap/Wing Sweep Interlock Solenoid (Wing Sweep/Flap and Slat Control Box 50A2)				K43 Aux Flap Solenoid Left Glove Relay Box (773A1) CB3 (5A) Aux Flap/Flap Contr (36A2)	11Q18	CEL102	INSPD Fig. 2 Zones 1C, 24C, 26A, 33A, 34A, 35A, 35C	102
103	< 6° Discrete (Solid State Driver)	< 6°-28VDC > 6°-open	AC Power Contactor Assembly (66A6)				N/A - Associated with Item 102 above	00R23	CEL103	INSPD Fig. 2 Zone 33A	103
104	DC - 1 Pole	V = 28VDC	a) Retract Right Aux Flap (28VDC) Solenoid (Right Auxiliary Flap Actuator 51A6) b) Retract Left Aux Flap (28VDC) Solenoid (Left Auxiliary Flap Actuator 51A7) c) Disable Flap-Slat Drive (28VDC) (Flap and Slat Hydraulic Control Valve 5111)				E96 Flap/Slat Lockout (Left Glove Relay Box 773A1) K25 Aux Flap Control (Left Glove Relay Box 773A1) CB11 (5A) Flap/Slat Contr Shut off (36A3)	11Q19	CEL104	INSPD Fig. 2 Zone 34A, 34B, 34B, 1B	104

TABLE II. E-10 SOLID STATE POWER CONTROLLERS AND DRIVERS

1 Table Item #	2 Type of Power Controller	3 Rating V & I	4 Associated Loads	5 Duty Cycle	6 Load Power Dissipation	7 P.C. Location	8 Conventional Devices Being Replaced	9 Operational Address	10 Identifier Code	11 Reference Drawings	12 Associated Boolean Equations
105	DC - 1 Pole	V = 28VDC	a) Extend Left Aux Flap (28VDC) Solenoid (Left Auxiliary Flap Actuator 51A7) b) Extend Right Aux Flap (28VDC) Solenoid (Right Auxiliary Flap Actuator 51A6)	100%			Same as Above Item 104	11Q20	CK1105	IWSFD Fig. 2 Zone 3A, 3B	105
106	DC - 1 Pole	V = 28VDC	Steep Indicator (50A6)	100%			*Same CK2 as Item 095, 096, 097, 098	02D12	CK1106	IWSFD Fig. 2 Zone 21B, 1C	106
117	DC - 1 Pole (28VDC Test Lamp Driver)	V = 28VDC	NO GO Test Lamp (Sys. Test - Sys Per Panel 790A)				CB32 Gnd Test (36A4) K19 M/G Safety A RHB (772A1) S1 System Test & S1 System Per Phil P/O S2 (790A1) K2	02D13	MU1117	IWSFD Fig. 2 Zone 3B	117
118	DC - 1 Pole (28VDC Test Lamp Driver)	V = 28VDC	GO Test Lamp (Sys. Test - Sys Per Panel 790A1)				Same as MU1117	02D14	MU1118	IWSFD Fig. 2 Zone 3B	118
119	DC - 1 Pole	V = 28VDC I = 3A	Wheels - Flaps Position Indicator (78A1)	100%			CK6 (3A) 28VDC Wheel Position Indicator (36A2)	02D15	CK1119	IWSFD Fig. 2 Zone 3A, 1C	119

TABLE III F-14 SCOTEL BOOLEAN EQUATIONS

1 Table Item #	2 Boolean Equation	3 Transducer List Cross Reference	4 Solid State Controller List Cross Reference	5 Bus/Load Management Priority	6 Special Considerations	7 Reference Drawings	8 Equation Description & Notes
018	C:101B	NA	01B	3	H. Main Bus	MSFD Fig. 2 Zone 17A	Wing Flap Glove Vane Controller (5045) Test 28VAC = 28VDC Right Main Bus Energized
019	U:101P = XA3003 • XA3004 • HES005	003 004 005	019	2	Ess. No. 2 Bus	MSFD Fig. 2 Zone 1A, 2A, 3C	A/C 115VAC #A = Right Main Generator On-Line or Left Main Generator On-Line or Ground Cooling Pressure Switch High
020	CN1020	NA	020	2	Ess. No. 2 Bus	MSFD Fig. 2 Zone 17C	Wing Flap Glove Vane Controller (5045) Flap 115VAC #C #1 = 115VAC #C Essential #2 Bus
021	CN1021	NA	021	2	Ess. No. 2 Bus	MSFD Fig. 2 Zone 17C	Wing Flap Glove Vane Controller (5045) 115VAC #C #1 = 115VAC #C Essential #2 Bus
022	CN1022	NA	022	2	Ess. No. 2 Bus	MSFD Fig. 2 Zone 17C	Wing Flap Glove Vane Controller (5045) 115VAC #C #2 = 115VAC #C Essential #2 Bus
023	CN1023	NA	023	2	Ess. No. 2 Bus	MSFD Fig. 2 Zone 21C	Wing Sweep Indicator (5046) 115VAC #B = 115VAC #B Essential #2 Bus
024	T11024	NA	024	2	Ess. No. 2 Bus	MSFD Fig. 2 Zone 8B	Angle of Attack Filter (4545) 115VAC #B = 115VAC #B Essential #2 Bus
025	C:1025	NA	025	2	Ess. No. 2 Bus	MSFD Fig. 2 Zone 30B, 32A	Flaps Position Indicator and Flap Position Transmitter 115VAC #B = 115VAC #B Essential #2 Bus
026	U:1026 = (HES002 • HES102 • CFS006 • CN3027) • (HES002 • CN3030 • CFS027) • (CFS028 • CFS009)	002 102 006 027 028 029 030	026	2	* See Note 1 Ess. No. 2 Bus	MSFD Fig. 2 Zone 1C, 2B, 2C 3C, 36C, 37C, 35B, 20B	Wing Oversweep Actuator 115VAC #A = 115VAC Weight On Wheels AND BMSG Weight on Wheels AND Horizontal Tail Authority Stop Switch Open AND Wing Sweep Handle Position Switch Raised 2.5 Inches OR Weight on Wheels AND Wing Sweep Handle Switch < 68° AND Wing Sweep Handle Position Switch Lowered AND Horizontal Tail Restricted Authority Switch Restricted OR Aft Stick Authority Switch Reduced Authority
026	U:1026 = HES002 • HES102 • CFS006 • CN3027	002 102 006 027	026	2	* See Note 1 ** See Note 2 Ess. No. 2 Bus	Same as Above	Wing Oversweep Actuator 115VAC #B (Extend) = Left AND Right MIG Weight on Wheels AND Horizontal Authority Stop Switch Open AND Wing Sweep Handle Position Switch - Raised 2.5 Inches

TABLE III F-14 SUSTAIN BOOLEAN EQUATIONS

1 Table Item #	2 Boolean Equation	3 Transducer List Cross Reference	4 Solid State Controller List Cross Reference	5 Bus/Load Management Priority	6 Special Considerations	7 Reference Drawings	8 Equation Description & Notes
097	$Q1097 = (C18002 \bullet C18102 \bullet C18030 \bullet C18027) \bullet (C18028 + C18029)$	002 102 027 028 029 030	097	2	* See Note 1 ** See Note 2 Ess. No. 2 Bus	INSFD Fig. 2 Zone 1C, 2A, 2C, 3C, 38C, 37C, 33B, 20B	Wing Overseep Actuator 115VAC AC (Retract) = Left AND Right Mid Weight on Wheels AND Wing Sweep Handle Position Switch - < 60° AND Wing Sweep Handle Position Switch Lowered AND Horizontal Tail Authority Switch Restricted OR Aft Stick Authority Switch - Reduced Authority
098	$Q1098 = (C18002 \bullet C18102 \bullet C18036 \bullet C18027) \bullet [(C18002 \bullet C18030 \bullet C18027) \bullet (C18028 + C18029)]$	002 102 036 027 028 029 030	098	2	* See Note 1 Ess. No. 2 Bus	Same as Above	Wing Overseep Actuator 28VDC Clutch/Brake Solenoid = Left AND Right Mid Weight on Wheels AND Horizontal Tail Authority Stop Switch Open AND Wing Sweep Handle Position Switch Raised 2.5 Inches OR Weight on Wheels AND Wing Sweep Handle Switch < 60° AND Wing Sweep Handle Position Switch Lowered AND Horizontal Tail Restricted Authority Switch Restricted OR Aft Stick Authority Switch - Reduced Authority
102	$C18102 = C18034 \bullet C18035 \bullet C18036$	034 035 036	102	2	Ess. No. 2 Bus	INSFD Fig. 2 Zone 1C, 2A, 26A, 33A, 34A, 35A, 35C	Enable > 20° Wing Sweep (> 20VDC) = Left Aux Flap Retract Switch Retracted AND Right Aux Flap Retract Switch Retracted AND Flap Handle < 60°
103	$C18103 = C18036$	036	103	2	Ess. No. 2 Bus	INSFD Fig. 2 Zone 33A	< 60° Discrete to the AC Power Contactor Assembly (6606) = Flap Handle < 60°
104	$C18104 = C18041 + C18042 + C18043 + C18044 + (C18035 \bullet C18040) + (C18037 \bullet C18038)$	037 038 039 040 041 042 043 044	104	2	Ess. No. 2 Bus	INSFD Fig. 2 Zone 2A, 20B, 40B, 26A, 33A, 33B, 37A, 38A, 39A, 40A, 1C, 26B, 35C	Retract Right and Left Aux Flaps and Disable Flap - Slat Drive = Right Flap Overtravel Up OR Right Flap Overtravel Down OR Left Flap Overtravel Up OR Left Flap Overtravel Down OR Left AND Right Flap Asymmetry OR Left AND Right Slat Asymmetry
<p>Note 1 These Controllers must be activated &amp; deactivated "Simultaneously" (similar to Multi-Pole Relay Function)</p> <p>Note 2 These Controllers must be wire OR'ED at outputs (equivalent to SP DT CO Relay Function)</p>							



TABLE III F-14 SUSTAIN FLAP EQUATIONS

1 Table Item #	2 Boolean Equation	3 Transducer List Cross Reference	4 Solid State Controller List Cross Reference	5 Bus/Load Management Priority	6 Special Considerations	7 Reference Drawings	8 Equation Description & Notes
105	$CK1105 = CKS045 \bullet$ $CKS046 \bullet CKS039 \bullet$ $CK1106$	037 038 039 040 041 042 043 044 045 046 047	105	2	Ess. No. 2 Bus	IMSPD Fig. 2 Zones 2A, 20B, 40B, 20A, 33A, 33B, 37A, 38A, 39A, 40A, 1C, 26B, 35C	Extend Flight and Left Aux Flaps Wing Sweep 20° AND Flap Handle > 5° AND Flap Interlock Engaged AND (Retract Right and Left Aux Flaps and Disable Flap-Slat Drive) NOT
106	CELL06	N/A	106	2	Ess. No. 2 Bus	IMSPD Fig. 1 Zone 1C, 21B	Sweep Indicator 28VDC = 28 VDC ESS. #2 Bus Energized
117	$W1117 = WAS054$ $\bullet W13055 \bullet CKS071$ $\bullet CKS047$	047 054 055 071	117	3	R. Main Bus	IMSPD Fig. 2 Zone 39C, 26B, 24B, 1C	Sys Test - Sys Per Panel - NO QO Test Lamp Is On = Sys Test - Sys Per Panel Door Switch Open AND Test Switch Depressed AND Test Selector Switch In the Wing Sweep Position AND Flap Interlock Engaged
118	$W1118 = WAS054 \bullet$ $W13055 \bullet CKS071$ $\bullet CKS072$	054 055 071 072	118	3	R. Main Bus	IMSPD Fig. 2 Zone 39C, 26B, 24B, 1C	Sys. Test Sys Per Panel - QO Test Lamp Is On = Sys Test - Sys Per Panel Door Switch Open AND Test Switch Depressed AND Test Selector Switch In the Wing Sweep Position AND Flap Interlock Engaged
119	CTL 119	NA	119	2	Ess. No. 2 Bus	IMSPD Fig. 2 Zone 32A, 1C	Wheels - Flaps Position Indicator (28VDC) = 28VDC ESS. #2 Bus Energized

FIGURE 3 SHEET 1

TABLE I. F-14 SUSTEL SIGNAL TRANSDUCERS

1 Table Item #	2 Signal Name/Function	3 Identifier Code	4 Signal Source Box Identification	5 Point of Origin	6 Transducer Type	7 Present Signal Characteristics	8 Associated Loads	9 Conventional Switches Being Replaced or Deleted	10 Operational Address	11 Reference Drawings	12 Associated Boolean Equation	13 Conditioning Technique
006	Eng/Probes Anti-ice Switch-Oride	HAS006	Ext. Environment Control Panel (792AI)	Pilots Right Side Console PS225	3 Position Toggle Switch	Open or Switched 28VDC	Left Glove Relay Box (773AI) K30 Anti- Ice Probe Heater #2 Relay	1 - DPTT Switch	Q2P07	1WSFD- Fig. 3 Zone 3B	Q06 Q07 Q08 553	Solid State
007	Eng/Probes Anti-ice Switch-Auto	HAS007	Ext. Environment Control Panel (792AI) (See above)	Pilots Right Side Console PS225	3 Position Toggle Switch	Open or Switched 28VDC	Same as above	DPTT Switch	Q2P08	1WSFD- Fig. 3 Zone 3B	Q06 Q07 Q08	Solid State

FIGURE 3 SHEET 2

TABLE I. P-14 SUBTEL SIGNAL TRANSDUCERS

1 Table Item #	2 Signal Name/Function	3 Identifier Code	4 Signal Source Box Identification	5 Point of Origin	6 Transducer Type	7 Present Signal Characteristics	8 Associated Loads	9 Conventional Switches Being Replaced or Deleted	10 Operational Address	11 Reference Drawings	12 Associated Boolean Equation	13 Conditioning Technique
046	Exterior Lites - Off	LAS046	Throttle Quadrant (711A1)	Pilots Left Side Console FS225	Toggle Switch	OFF = Open ON = 28VDC	K21- Approach Lites Dim Relay (Right Glove Relay Box 772A1)	Exterior Lites Switch	01P10	IMSFD Fig. 3 Zone 6C	107A, B, C, D 108A, B, C, D 109A, B, C, D 158 thru 167	Solid State
049	Hook Control Handle - down	GS049	Hook/Jan Panel (706A1)	Pilots Right Side Console FS225	Toggle Switch	DOWN = 115 VAC UP = 115 VAC $\phi$ B	a) AC Flasher (G0819) b) 26 Volt Auto Trans- former (4571)	Hook Control Handle Switch	02P09	IMSFD Fig. 3 Zone 12B	107A, B, C, D 108A, B, C, D 109A, B, C, D 285 286 297	Solid State
050	Hook Bypass - Carrier	GS050	Master Lite Control Panel (713A1)	Pilots Right Side Con- sole FS225	Toggle Switch	Carrier = 115 VAC $\phi$ B Field = 115 VAC	Same as above 049	Hook Bypass Switch	02P10	IMSFD Fig. 3 Zone 12B	107A, B, C, D 108A, B, C, D 109A, B, C, D 297	Solid State
051	Arresting Hook - Down	GS051	Hook Down Switch (4952)	Art FS 738 ML 125	Limit Switch	Hook Down = GND Not Down = Open	K8 - Hook Down Relay (Right Glove Relay Box 772A1)	Hook Down Switch	07P20	IMSFD Fig. 3 Zone 9B	107A, B, C, D 108A, B, C, D 109A, B, C, D 297	Solid State
052	MLG - Down	GS052	MLG Handle	Left Vertical Console FS225	Toggle Switch	DOWN = 28VDC UP = OPEN	K6 MLG REL 7P Relay (Right Glove Relay Box 772A1)	MLG Handle Switch	01P11	IMSFD Fig. 3 Zone 10B	709 099 540 708 264 298 503 539 281 285 287 107A, B, C, D 108A, B, C, D 109A, B, C, D 123, 124, 125, 126, 127, 128, 129, 130, 246, 279, 280	Solid State
Note:	1a) MLG-Down + 1b) GS052 = (GS002 * GS002) + (GS002 * GS002) * MLG handle down						on wheels AND	MLG handle down				

TABLE I. P-14 SUSTEL SIGNAL TRANSDUCERS

1 Table Item #	2 Signal Name/Function	3 Identifier Code	4 Signal Source Box Identification	5 Point of Origin	6 Transducer Type	7 Present Signal Characteristics	8 Associated Loads	9 Conventional Switches Being Replaced or Deleted	10 Operational Address	11 Reference Drawings	12 Associated Boolean Equation	13 Conditioning Technique
052 Note: (cont'd)	2a) M/G - Up 2b) GBS052 = $\overline{\text{GBS002}} + \text{GBS142}$ • M/G handle up 3) When M/G solenoid 11 is energized (left or right WCM)			on wheels)	end M/G handle up							
053	High Approach	LAS053	Angle of Attack Indicator (45A2)	Pilots Left Instrument Panel FS225	N/A	High = 26 VAC HIGH = OPEN	High Approach Lamp Filaments	N/A	05D02	INSFD Fig. 3 Zone 8A	107A, B, C, D 108A, B, C, D 222 564 565 566 563	External Signal Adapter
054	Door Switch-Open	MAS054	System Test - System Power Panel (790A1)	NFO Left Knee Instrument Panel FS290	Limit Switch	Open = 28 VDC CLOSED = OPEN	System Test Panel	Limit Switch	03P05	INSFD Fig. 3 Zone 9A	107A, B, C, D 108A, B, C, D 222 564 565 566 563	Solid State
055	Test - Depressed	MUS055	System Test - System Power Panel (790A1)	NFO Left Knee Instrument Panel FS290	Push Button Momentary	Depressed = 28 VDC Released = Open	System Test Panel	Push Button	03P06	INSFD Fig. 3 Zone 9A	107A, B, C, D 108A, B, C, D 222 564 565 566 563	Solid State
056	ATTX Selected	LAS056	System Test - System Power Panel (790A1)	NFO Left Knee Instrument Panel FS290	P/O 9 Position Rotary	• ATTK = 28 VDC Off = Open	System Test Panel	Rotary	03P07	INSFD Fig. 2 Zone 9A	107A, B, C, D 108A, B, C, D 222 564 565 566 563	Solid State
057	Low Approach	LAS057	Angle of Attack Indicator (45A2)	Pilots Left Instrument Panel FS225	N/A	DIM = 26 VAC DIM = Open	Low Approach Lamp Filaments	N/A	05D03	INSFD Fig. 3 Zone 8B	108A, B, C, D	External Electronic Adapter (Voltage Sense)

FIGURE 3 SHEET 4

TABLE 1. F-14 SOTEL SIGNAL TRANSDUCERS

1 Table Item #	2 Signal Name/Function	3 Identifier Code	4 Signal Source Box Identification	5 Point of Origin	6 Transducer Type	7 Present Signal Characteristics	8 Associated Loads	9 Conventional Switches Being Replaced or Deleted	10 Operational Address	11 Reference Drawings	12 Associated Boolean Equation	13 Conditioning Technique
058	Normal Approach	LAS055	Angle of Attack Indicator (45A2)	Pilots Left In- strument Panel PS225	N/A	NORMAL = 26 VAC NORMAL = Open	Normal Approach Load Filaments	N/A	05004	IMSFD Fig. 3 Zone 6B	109A, B, C, D	External Elec- tronic Adap- ter (Voltage Sense)
073	LTS	LAS073	Master Test Panel (73A41)	Pilots Right Side Con- sole PS225	12 Position Rotary Switch	LITS = 26 VDC LITS = Open	K13 Warn- ing LITS Test No. 2 Relay		02P11	IMSFD Fig. 3 Zone 6B	120A, B, C, D 121A, B, C, D 122A, B, C, D 504, 569, 570 578 579	Solid State



TABLE II F-14 SOLID STATE POWER CONTROLLERS AND DRIVERS

1 Table Item #	2 Type of Power Controller	3 Rating V & I	4 Associated Loads	5 Duty Cycle	6 Load Power Dissipation	7 P.C. Location	8 Conventional Devices Being Replaced	9 Operational Address	10 Identifier Code	11 Reference Drawings	12 Associated Boolean Equations
006	AC - 1 Pole	V = 115VAC I = 7.5 AMP	a) Angle of Attack Transmitter (4503) Heaters b) Left Total Tem- perature Probe Heater (0502)				CB6 (7.5A) Ant Attk Total Temp Htr (3504) K29 Left Glove Relay Box (773A1) Anti-ice Probe Htr Relay #1 K17 Left Glove Relay Box (773A1) MEG Safety Relay CB13 (3A) Eng./Probe Anti-ice (3603) K30 Left Glove Relay Box (773A1) Anti-ice Probe Htr Relay #2	01Q01	HAL026	IWSFD Fig. 3 Zone 3B, 4B, 5A IWSFD Fig. 4 Zone 4B	Q06

FIGURE 3 SHEET 2

TABLE II F-14 SOLID STATE POWER CONTROLLERS AND DRIVERS

1 Table Item #	2 Type of Power Controller	3 Rating V & I	4 Associated Loads	5 Duty Cycle	6 Load Power Dissipation	7 P.C. Location	8 Conventional Devices Being Replaced	9 Operational Address	10 Identifier Code	11 Reference Drawings	12 Associated Boolean Equations
107	1 Pole 26 VAC		High Approach Lite Bright (Green)				CB55 (5A) 28 VDC - Ext. Lt Contr (3642)	03Q39	LAL107	IWSFD Fig. 3	107A, B
108	1 Pole 26 VAC		Low Approach Lite Bright (Red)				CB32 (5A) 28 VDC - GND Test/Mech Lvr Bit (3641)	03Q40	LAL108	IWSFD Fig. 3	108A, B
109	1 Pole 26 VAC		Normal Approach Lite Bright (Yellow)				CB20 (5A) 115 VAC - Angle of Attk Ind. AC (3542)		LAL109	IWSFD Fig. 3	109A, B
207	1 Pole 26 VAC		High Approach Lite Dim (Green)				CB31 (5A) 28 VDC - Main Rpt/Anti-ice Contr/Hk Contr (3642)	03Q41	LAL207	IWSFD Fig. 3	207A, B
208	1 Pole 26 VAC		Low Approach Lite Dim (Red)				K19 M.G. Safety "A" WOM Right Glove Relay Box (772A1)		LAL208	IWSFD Fig. 3	208A, B
209	1 Pole 26 VAC		Normal Approach Lite Dim (Yellow)	100%			K18 GND Test Right Glove Relay Box (772A1) K8 Hook Down Right Glove Relay Box (772A1)		LAL209	IWSFD Fig. 3	209A, B
110	AC - 1 Pole	V = 115 I = VAC	a) Angle of Attack Filter (4.5A) b) Angle of Attack (4.5A2)				K21 Approach Lites Dim Right Glove Relay Box (772A1) AC Flasher (600319) CB20 (5A) 115 VAC - Angle of Attk Ind. AC (3542) Same as Item 107, 108, 109	07Q06	FBL110	IWSFD Fig. 3 Zone 5A, 7A	110

FIGURE 3 SHEET 3

TABLE II P-4 SOLID STATE POWER CONTROLLERS AND DRIVERS

1 Table Item #	2 Type of Power Controller	3 Rating V & I	4 Associated Loads	5 Duty Cycle	6 Load Power Dissipation	7 P.C. Location	8 Conventional Devices Being Replaced	9 Operational Address	10 Identifier Code	11 Reference Drawings	12 Associated Boolean Equations
120	DC - 1 Pole (Could be low power lamp driver)	V = 28VDC I =	High Indexer Lite Drive Master Lite Con- trol Panel (713A1)				K13 (Warning Lights test No. 2) CB17 (5A) Angle of Attk Ind DC (36A2)	02D16	LAL120	IWSFD Fig. 3 Zone 10C, 11C	120
121	DC - 1 Pole (Could be low power lamp driver)	V = 28VDC I =	Low Indexer Lite Drive Master Lite Control Panel (713A1)				Same as above (Item 120)	02D17	LAL121	IWSFD Fig. 3 Zone 10C, 11C	121
122	DC - 1 Pole (could be low power lamp driver)	V = 28VDC I =	Normal Indexer Lite Drive Master Lite Con- trol Panel (713A1)				Same as above (Item 120)	02D18	LAL122	IWSFD Fig. 3 Zone 10C, 11C	122
123	DC - 1 Pole	V = 28VDC I =	Angle of Attack Indicator (45A2)	100%			CB17 (5A) Angle of Attk Ind DC (36A2) (Same as Item 120)	02D19	FOL123	IWSFD Fig. 3 Zone 7C	123

TABLE III F-14 SGTSL BOOLEAN EQUATIONS

FIGURE 3 SHEET 1

1 Table Item #	2 Boolean Equation	3 Transducer List Cross Reference	4 Solid State Controller List Cross Reference	5 Bus/Load Management Priority	6 Special Considerations	7 Reference Drawings	8 Equation Description & Notes
026	$HAS026 = HAS006 + HAS007 \cdot \overline{HAS002} \cdot \overline{HAS102}$	002 102 006 102 007	026	2	Ess #2	INSPD Fig. 3 Zone 3B, 1B, 5A	Angle of Attack Transmitter (4-543) heaters and the left total temperature probe (0542) heaters are ON - if the engine/probe anti-ice switch is in <u>ONIDE</u> or if in the <u>AUTO</u> position <u>AND</u> left <u>AND</u> right <u>MLG</u> does not have weight on wheels
107A (See note)	$LAL107 = \overline{HAS002} + \overline{HAS102} \cdot \overline{HAS052} \cdot \overline{HAS051} \cdot LAS053 \cdot LAS046$ $+ \overline{HAS002} + \overline{HAS102} \cdot \overline{HAS052} \cdot \overline{HAS051} \cdot \overline{LAS046} \cdot LAS053$	002 102 046 050 051 052 053 054 055 056	107	2	Ess #2	INSPD Fig. 3	High approach lite brite steady = Left OR right <u>MLG</u> weight is on wheels <u>AND</u> <u>MLG</u> down <u>AND</u> <u>arresting</u> hook down <u>AND</u> high approach detected <u>AND</u> exterior lites off OR Left OR right <u>MLG</u> weight is not on wheels <u>AND</u> <u>MLG</u> down <u>AND</u> <u>arresting</u> hook not down <u>AND</u> field is selected <u>AND</u> hook control handle up <u>AND</u> high approach detected <u>AND</u> exterior lites off OR Left <u>AND</u> right <u>MLG</u> weight is on wheels <u>AND</u> <u>MLG</u> down <u>AND</u> <u>arresting</u> hook down <u>AND</u> high approach detected <u>AND</u> exterior lites off <u>AND</u> door switch open <u>AND</u> $\angle$ Attk selected <u>AND</u> the test button is depressed or was depressed when all other conditions were satisfied OR Left <u>AND</u> right <u>MLG</u> weight is on wheels <u>AND</u> <u>MLG</u> down <u>AND</u> <u>arresting</u> hook not down <u>AND</u> field is selected <u>AND</u> hook control handle up <u>AND</u> high approach detected <u>AND</u> exterior lites off <u>AND</u> door switch open <u>AND</u> $\angle$ Attk selected <u>AND</u> the test button is depressed or was depressed when all other conditions were satisfied
**	$\overline{HAS102} \cdot \overline{HAS052} \cdot \overline{HAS051} \cdot \overline{LAS046} \cdot LAS053$ $+ \overline{HAS002} + \overline{HAS102} \cdot \overline{HAS052} \cdot \overline{HAS051} \cdot \overline{LAS046} \cdot LAS053$	002 102 046 050 051 052 053 054 055 056			** Latching Test Button Function		
**	$\overline{HAS102} \cdot \overline{HAS052} \cdot \overline{HAS051} \cdot \overline{LAS046} \cdot LAS053$ $+ \overline{HAS002} + \overline{HAS102} \cdot \overline{HAS052} \cdot \overline{HAS051} \cdot \overline{LAS046} \cdot LAS053$	002 102 046 050 051 052 053 054 055 056					

Note: Brite Steady - Requires controller on 107A  
(26 VAC steady)

107A = Brite Steady  
107B = Dim Steady  
107C = Brite Flash  
107D = Dim Flash

TABLE III. F-14 SOSTEL BOOLEAN EQUATIONS

FIGURE 3 SHEET 2

1 Table Item #	2 Boolean Equation	3 Transducer List Cross Reference	4 Solid State Controller List Cross Reference	5 Bus/Load Management Priority	6 Special Considerations	7 Reference Drawings	8 Equation Description & Notes
108A (see Note)	$LALL08 = [G8002 +$ $G8102] \bullet$ $G8052 \bullet G8051 \bullet$ $G8052 \bullet LAS048]$ $LAS057 \bullet LAS048]$ $[ (G8002 +$ $G8102) \bullet G8052$ $\bullet G8051 \bullet G8050$ $\bullet G8049 \bullet LAS057$ $\bullet LAS048]$ $+ [G8002 \bullet$ $G8102 \bullet G8052$ $\bullet G8051 \bullet LAS057$ $\bullet LAS048 \bullet WAS054$ $\bullet LAS056 \bullet MUS055]$ $(t+1)$ $+ [G8002 \bullet$ $G8102 \bullet G8052$ $\bullet G8051 \bullet G8050$ $\bullet G8049 \bullet LAS057$ $\bullet LAS048 \bullet WAS054$ $\bullet LAS056 \bullet MUS055]$ $(t+1)$	002,02 048 049 050 051 052  054 055 056 057	108	2	Ess #2  ** Latching test button function	INSFD Fig. 3	<p>Low approach lite brite steady = Left OR right M/G Weight is not on wheels AND M/G down AND arresting hook down AND high approach detected AND exterior lites off</p> <p>OR</p> <p>Left OR right M/G Weight is not on wheels AND M/G down AND arresting hook not down AND field is selected AND hook control handle up AND low approach detected AND exterior lites off</p> <p>OR</p> <p>Left AND right M/G Weight is on wheels AND M/G down AND arresting hook down AND low approach detected AND exterior lites off AND door switch open AND <math>\frac{1}{2}</math> AIX selected AND the test button is depressed or was depressed when all other conditions were satisfied</p> <p>OR</p> <p>Left AND right M/G Weight is on wheels AND M/G down AND arresting hook not down AND field is selected AND hook control handle up AND low approach detected AND exterior lites off AND door switch open AND <math>\frac{1}{2}</math> AIX selected AND the test button is depressed or was depressed when all other conditions were satisfied</p> <p>Note: Brite Steady - Requires controller on 108A (26VAC Steady)</p>



Table Item #	1	2	3	4	5	6	7	8
		Boolean Equation	Transducer List Cross Reference	Solid State Controller List Cross Reference	Bus Load Management Priority	Special Considerations	Reference Drawings	Equation Description & Notes
109A (See note)		[ALL <sub>IN</sub> ] • [TESTOZ] + [TESTOZ] • GRS0Y1 • LASOY2 LASOY8 ] + [(GRS0XZ) • [GSI1DZ] ) • GRSDYZ • GSRDY1 • GRSDYO • GRSDYG • LASSOYB • LASOYB ] + [GRSOXE •  GRSIOE • GRSDYE • GRSYI • LASSOE • LASSOB • MASOYA • LASOYC • MISOYS(1-1) ]+ [GRSOZE •  GRSIOZ • GRSDYZ • GRSOI • GRSDYO • GRSDYG • LASSOB • LASSOB • MASOYA • LASOYC • MISOYS(1-1)]	OQZ IOE OA B IOE OAG OO O OS I OS E  O Y A O Y S O Y C O Y R	IQA	Z	Eas #2   ** Latching Test Button Function	TWSP Fig. 3	Normal approach lite brite steady = left OR right MELG Weight is not on wheels AND MELG down AND arresting hook down AND normal approach detected AND exterior lites off  OR  Left OR right MELG Weight is not on wheels AND MELG down AND arresting hook not down AND field is selected AND hook control handle up AND normal approach detected AND exterior lites off  OR  Left AND right MELG Weight is on wheels AND MELG down AND arresting hook down AND normal approach detected AND exterior lites off and door switch open AND 4 Attk selected AND the test button is depressed or was depressed when all other conditions were satisfied  OR  Left AND right MELG Weight is on wheels AND MELG down AND arresting hook handle up AND normal approach detected AND exterior lites off THE door switch open AND 4 ATTK selected AND the test button is depressed or was depressed when all other conditions were satisfied
**	*	* * *						Note: Brite Steady - requires controller on 109A (26VAC Steady)

TABLE III F-14 SOSTEL BOOLEAN EQUATIONS

1 Table Item #	2 Boolean Equation	3 Transducer List Cross Reference	4 Solid State Controller List Cross Reference	5 Bus/Load Management Priority	6 Special Considerations	7 Reference Drawings	8 Equation Description & Notes
107B (See note)	$LAL107 = \overline{[GBS002 +$ $\overline{GBS102}] \bullet GBS092$ $\bullet GBS051 \bullet LAS053$ $\bullet LAS048 \bullet GBS050]$ $+ [GBS002 +$ $\overline{GBS102}] \bullet GBS092$ $\bullet GBS051 \bullet LAS053$ $\bullet LAS048 \bullet GBS050$ $\bullet GBS049]$ $+ [GBS002 \bullet$ $\overline{GBS102} \bullet GBS092$ $\bullet GBS051 \bullet LAS053$ $\bullet LAS048 \bullet GBS050$ $\bullet WAS054 \bullet LAS056$ $\bullet MJS055 (t+1)]$ $+ [GBS002 \bullet$ $\overline{GBS102} \bullet GBS092$ $\bullet GBS051 \bullet LAS053$ $\bullet LAS048 \bullet GBS050$ $\bullet WAS054 \bullet MJS055 (t+1)]$	002 102 048 049 050 051 052 053 054 055 056	107	2	Ess #2	INSPT Fig. 3	<p>High approach lite Brite Flash = Left OR right M/G Weight is not on wheels AND M/G down AND arresting hook not down AND high approach detected AND exterior lites off AND carrier is selected</p> <p>OR</p> <p>Left OR right M/G Weight is not on wheels AND M/G down AND arresting hook not down AND high approach detected AND exterior lites off AND field is selected AND hook control handle is down</p> <p>OR</p> <p>Left AND right M/G Weight is on wheels AND M/G down AND arresting hook not down AND high approach detected AND exterior lites off AND carrier is selected AND door switch open AND 4 Attk selected AND the test button is depressed or was depressed when all other conditions were satisfied</p> <p>OR</p> <p>Left AND right M/G Weight is on wheels AND M/G down AND arresting hook not down AND high approach detected AND exterior lites off AND field is selected AND hook control handle is down AND door switch open AND 4 Attk selected AND the test button is depressed or was depressed when all other conditions were satisfied</p> <p>Note: Brite Flash requires SSFC to be turned 107C on for <math>\approx 0.6</math> sec off for <math>\approx 0.2</math> sec</p>

TABLE III P-14 SSMR BOOLEAN EQUATIONS

FIGURE 3 SHEET 5

1 Table Item #	2 Boolean Equation	3 Transducer List Cross Reference	4 Solid State Controller List Cross Reference	5 Bus/Load Management Priority	6 Special Considerations	7 Reference Drawings	8 Equation Description & Notes
108B (See note)	$LAL108 \cdot \overline{GES002} +$ $\overline{GES102} \cdot \overline{GES052}$ $\cdot \overline{LAS057}$ $\cdot \overline{LAS051}$ $\cdot \overline{LAS048}$ $\cdot \overline{GES050}$ $+ [\overline{GES002} \cdot$ $\overline{GES102}] \cdot \overline{GES052}$ $\cdot \overline{GES051}$ $\cdot \overline{LAS057}$ $\cdot \overline{LAS048}$ $\cdot \overline{GES050}$ $\cdot \overline{GES049}] \cdot \overline{GES002} \cdot$ $\overline{GES102} \cdot \overline{GES052}$ $\cdot \overline{GES051}$ $\cdot \overline{LAS057}$ $\cdot \overline{LAS048}$ $\cdot \overline{GES050}$ $\cdot \overline{LAS054} \cdot \overline{LAS056}$ $\cdot \overline{MUS055} (V_{11})]$ $+ [\overline{GES002} \cdot$ $\overline{GES102} \cdot \overline{GES052}$ $\cdot \overline{GES051}$ $\cdot \overline{LAS057}$ $\cdot \overline{LAS048}$ $\cdot \overline{GES050}$ $\cdot \overline{LAS054} \cdot \overline{LAS056}$ $\cdot \overline{MUS055} (V_{11})]$	002 102 048 049 050 051 052 054 055 056 057	108	2	Ess #2  * Latch Test Button Function	INSFD Fig. 3	<p>Low approach lite brite flash = left OR right MLC weight is not on wheels AND MLC down AND arresting hook not down AND low approach detected AND exterior lites off AND carrier is selected</p> <p>OR</p> <p>Left OR right MLC weight is not on wheels AND MLC down AND arresting hook not down AND low approach detected AND exterior lites off AND field is selected AND hook control handle is down</p> <p>OR</p> <p>Left AND right MLC weight is not on wheels AND MLC down AND arresting hook not down AND low approach detected AND exterior lites off AND carrier is selected AND door switch open AND attack selected AND the test button is depressed OR was depressed when all other conditions were satisfied</p> <p>OR</p> <p>Left AND right MLC weight is not on wheels AND MLC down AND arresting hook not down AND low approach detected AND exterior lites off AND field is selected AND hook control handle is down AND door switch open AND attack selected AND the test button is depressed OR was depressed when all other conditions were satisfied</p> <p>Note: 107C - Brite flash requires SSR to be turned on for <math>\approx 0.6</math> sec off for <math>\approx 0.2</math> sec</p>

1 Table Item #	2 Boolean Equation	3 Transducer List Cross Reference	4 Solid State Controller List Cross Reference	5 Bus/Load Management Priority	6 Special Considerations	7 Reference Drawings	8 Equation Description & Notes
109B (See note)	$LAL109 = \left[ \frac{GSR102}{GSR102} + \right.$ $\frac{GSR102}{GSR102} \cdot \left[ \frac{GSR052}{GSR051} \cdot \left[ \frac{LAS048}{LAS048} \cdot \left[ \frac{GSR050}{GSR050} \right] \right. \right.$ $\left. \left. + \frac{GSR002}{GSR002} \cdot \left[ \frac{GSR052}{GSR051} \cdot \left[ \frac{LAS048}{LAS048} \cdot \left[ \frac{GSR050}{GSR050} \right] \right] \right. \right. \right.$ $\left. \left. + \frac{GSR049}{GSR049} \cdot \left[ \frac{LAS055(T+1)}{LAS055(T+1)} \right] \right] \right]$ $+ \left[ \frac{GSR002}{GSR002} \cdot \left[ \frac{GSR102}{GSR102} \cdot \left[ \frac{GSR052}{GSR051} \cdot \left[ \frac{LAS048}{LAS048} \cdot \left[ \frac{GSR050}{GSR050} \right] \right] \right. \right. \right.$ $\left. \left. + \frac{GSR049}{GSR049} \cdot \left[ \frac{LAS055(T+1)}{LAS055(T+1)} \right] \right] \right]$	GSR002 GSR049 GSR050 GSR051 GSR052  GSR048 GSR051 GSR052 GSR055 GSR056 GSR058	109	2	Ess #2  * Latch test button function	1WSFD Fig. 3	Normal approach lite brite flash = left OR right M/G Weight is not on wheels AND M/G down AND arresting hook not down AND normal approach detected AND ex- terior lites off AND carrier is selected  OR  Left OR right M/G Weight is not on wheels AND M/G down AND arresting hook not down AND normal approach detected AND exterior lites off AND field is selected AND hook control handle is down  OR  Left AND right M/G Weight is on wheels AND M/G down AND arresting hook not down AND normal approach detected AND exterior lites off AND carrier is selected AND door switch open AND $\phi$ atty selected AND the test button is de- pressed or was depressed when all other conditions were satisfied  OR  Left AND right M/G Weight is on wheels AND M/G down AND arresting hook not down AND normal approach detected AND exterior lites off AND field is selected and hook control handle is down AND door switch open AND $\phi$ atty sel- ected AND the test button is depressed or was de- pressed when all other conditions were satisfied  Note: 107C - Brite Flash requires SSPT to be turned on for $\approx 0.6$ sec off for $\approx 0.2$ sec

**TABLE III F-14 SOSTEL BOOLEAN EQUATIONS**

[illegible]



TABLE III. F-14 SUSTEL BOOLEAN EQUATIONS

1 Table Item #	2 Boolean Equation	3 Transducer List Cross Reference	4 Solid State Controller List Cross Reference	5 Bus/Load Management Priority	6 Special Considerations	7 Reference Drawings	8 Equation Description & Notes
206A	$LAL206 = \overline{[GSS002]} + \overline{[GSS002]} \cdot \overline{[GSS002]} + \overline{[GSS002]} \cdot \overline{[GSS002]} + \overline{[GSS002]} \cdot \overline{[GSS002]} + \overline{[GSS002]} \cdot \overline{[GSS002]} + \overline{[GSS002]} \cdot \overline{[GSS002]} + \overline{[GSS002]} \cdot \overline{[GSS002]} + \overline{[GSS002]} \cdot \overline{[GSS002]}$	002 102 048 049 050 051 052 054 055 056 057	206	2	Eas #2  ** Latching test button function	IWSPD Fig. 3	<p>Low approach lite dis steady = left OR right M.G. Weight is not on wheels AND M.G. down AND arresting hook down AND low approach detected AND exterior lites on</p> <p>OR</p> <p>Left OR right M.G. Weight is not on wheels AND M.G. down AND arresting hook not down AND field is selected AND hook control handle up AND low approach detected AND exterior lites on</p> <p>OR</p> <p>Left AND right M.G. Weight is on wheels AND M.G. down AND arresting hook down AND low approach detected AND exterior lites on AND door switch open AND <math>\overline{[ATX]}</math> selected AND the test button is depressed or was depressed when all other conditions were satisfied</p> <p>OR</p> <p>Left AND right M.G. Weight is on wheels AND M.G. down AND arresting hook not down AND field is selected AND hook control handle up AND low approach detected AND exterior lites on AND door switch open and <math>\overline{[ATX]}</math> selected AND the test button is depressed or was depressed when all other conditions were satisfied</p>

FIGURE 3 SHEET 9

TABLE III F-14 SOTEL BOOLEAN EQUATIONS

1 Table Item #	2 Boolean Equation	3 Transducer List Cross Reference	4 Solid State Controller List Cross Reference	5 Bus/Load Management Priority	6 Special Considerations	7 Reference Drawings	8 Equation Description & Notes
209B	$LAL209 = \overline{GES002} + \overline{GES102} + \overline{GES052} + \overline{GES051} + \overline{LAS048} + \overline{LAS046} + \overline{GES002} + \overline{GES102} + \overline{GES052} + \overline{GES051} + \overline{LAS048} + \overline{LAS046} + \overline{GES002} + \overline{GES102} + \overline{GES052} + \overline{GES051} + \overline{LAS048} + \overline{LAS046}$	002102 048 049 090 051 052 094 055 056 058	209	2	Ess #2	INSFD Fig. 3	<p>Normal approach lite dim steady = Left OR right M/G Weight is not on wheels AND M/G down AND arresting hook down AND normal approach detected AND exterior lites on</p> <p>OR</p> <p>Left OR right M/G Weight is not on wheels AND M/G down AND arresting hook not down AND field is selected AND hook control handle up AND normal approach detected AND exterior lites on</p> <p>OR</p> <p>Left AND right M/G Weight is on wheels AND M/G down AND arresting hook down AND normal approach detected AND exterior lites on AND door switch open AND <math>\bar{x}</math> attack selected AND the test button is depressed or was depressed when all other conditions were satisfied</p> <p>OR</p> <p>Left AND right M/G Weight is on wheels AND M/G down AND arresting hook not down AND field is selected AND hook control handle up AND normal approach detected AND exterior lites on AND door switch open AND <math>\bar{x}</math> attack selected AND the test button is depressed or was depressed when all other conditions were satisfied</p>

1	2	3	4	5	6	7	8
Table Item #	Boolean Equation	Transducer List Cross Reference	Solid State Controller List Cross Reference	Bus/Load Management Priority	Special Considerations	Reference Drawings	Equation Description & Notes
207B (See note)	$LAL207 = \overline{[GSR002]} +$ $\overline{[GSR102]} \bullet GSR092$ $\bullet GSR091 \bullet GSR090$ $\bullet GSR093 \bullet LAS048$ $\bullet LAS093 \bullet [LAS048] +$ $\overline{[GSR102]} \bullet GSR092$ $\bullet GSR091 \bullet GSR090$ $\bullet GSR049 \bullet LAS093$ $\bullet LAS048$ $+ [GSR002] \bullet$ $GSR102 \bullet GSR092$ $\bullet GSR091 \bullet GSR090$ $\bullet LAS093 \bullet LAS048$ $\bullet MAS094 \bullet LAS096$ $\bullet MJS095(t_{n+1})$ $+ [GSR002] \bullet$ $GSR102 \bullet GSR092$ $\bullet GSR091 \bullet GSR090$ $\bullet GSR049 \bullet LAS093$ $\bullet LAS048 \bullet MAS094$ $\bullet LAS096 \bullet MJS095(t_{n+1})$	002 102 048 049 050 051 052 053 054 055 096	207	2	Ess. 2	INSFD Fig. 3	<p>High approach lite dim flash = Left OR right weight is not on wheels AND M.G. down AND arresting hook is not down AND carrier is selected AND high approach is detected AND exterior lites on</p> <p>OR</p> <p>Left OR right M.G.</p> <p>Weight is not on wheels AND M.G. down AND arresting hook is not down AND field is selected AND hook control handle is down AND high approach is detected AND exterior lites on</p> <p>OR</p> <p>Left AND right M.G.</p> <p>Weight is on wheels AND M.G. down AND arresting hook is not down AND carrier is selected AND high approach is detected AND exterior lites on AND door switch open AND <math>\bar{x}</math> atth selected AND the Test button is depressed or was depressed When all other conditions were satisfied</p> <p>OR</p> <p>Left AND right M.G.</p> <p>Weight is on wheels AND M.G. down AND arresting hook is not down AND field is selected AND hook control handle is down AND high approach is detected and exterior lites off AND door switch is open AND <math>\bar{x}</math> atth is selected AND the test button is depressed or was depressed When all other conditions were satisfied</p> <p>Note: 207B - Dim Flash - requires SSFC to be on for ~ 0.6 sec OFF FOR 0.2 sec</p>

**TABLE III F-14 SOSTEL BOOLEAN EQUATIONS**

1 Table Item #	2 Boolean Equation	3 Transducer List Cross Reference	4 Solid State Controller List Cross Reference	5 Bus/Load Management Priority	6 Special Considerations	7 Reference Drawings	8 Equation Description & Notes
2008 (See note)	$LAL208 = \overline{G65002} +$ $\overline{G65102} + G65092$ $G65051 + G65090$ $G65091 + G65097$ $G65098 +$ $G65102 + G65092$ $G65091 + G65090$ $G65099 + L65097$ $L65098$	002 102 048 049 050 051 052 054 055 056 057	208	2	Ess #2  * Latching Test Button Function	IMSFD Fig. 3	Low approach lite dlm Flash - Left OR right M/G weight is not on wheels AND M/G down AND arresting hook is not down AND carrier is selected AND low approach is detected AND exterior lites on  OR  Left OR right M/G Weight is not on wheels AND M/G down AND arresting hook is not down AND field is selected AND Hook Control handle is down and low approach is detected AND exterior lites on  OR  Left AND right M/G Weight is on wheels AND M/G down AND arresting hook is not down AND carrier is selected AND low approach is detected AND exterior lites on AND door switch open AND $\bar{x}$ attk selected AND the test button is depressed or was depressed when all other conditions were satisfied  OR  Left AND Right M/G Weight is on wheels AND M/G down AND arresting hook is not down AND field is selected AND hook control handle is down AND low approach is detected AND exterior lites off AND door switch is open AND $\bar{x}$ attk is selected AND the test button is depressed when all other conditions were satisfied
	$G65102 + G65092$ $G65051 + G65090$ $G65099 + L65097$ $L65098$ $L65096 + M65095(t, t_1)$						
	$G65102 + G65092$ $G65051 + G65090$ $G65099 + L65097$ $L65098$ $L65096 + M65095(t, t_1)$						

Note:  
2008 - Dlm Flash - Requires SSFC to go on for  
~ 0.6 sec off for ~ 0.2 sec

TABLE III F-14 SCSH BOEYAN EQUATIONS

1 Table Item #	2 Boolean Equation	3 Transducer List Cross Reference	4 Solid State Controller List Cross Reference	5 Bus/Load Management Priority	6 Special Considerations	7 Reference Drawings	8 Equation Description & Notes
209B (See note)	$LA209 \cdot [G83002 +$ $G83102] \cdot G83052$ $\cdot G83051 \cdot G83050$ $\cdot LAS058 \cdot LAS048]$ $+ [G83002 \cdot$ $G83102] \cdot G83052$ $\cdot G83051 \cdot G83050$ $\cdot LAS058 \cdot LAS048$ $\cdot LAS049 \cdot LAS058$ $\cdot LAS048]$ $+ [G83002 \cdot$ $G83102 \cdot G83052$ $\cdot G83051 \cdot G83050$ $\cdot LAS058 \cdot LAS048$ $\cdot WAS054 \cdot WAS056$ $\cdot WAS055(t,1)]$ $\cdot [G83002 \cdot$ $G83102 \cdot G83052$ $\cdot G83051 \cdot G83050$ $\cdot G83049 \cdot LAS058$ $\cdot LAS048 \cdot WAS054$ $\cdot LAS056 \cdot WAS055(t,1)]$	002 102 048 049 050 051 052 054 055 056 058	209	2	Ess #2  * Latching Test Button Function	IWSPD Fig. 3	Normal approach lite dim flash - Left OR Right M/G Weight is not on wheels AND M/G down AND arresting hook is not down AND carrier is selected AND normal approach is detected AND exterior lites on  OR  Left OR Right M/G Weight is not on wheels AND M/G down AND arresting hook is not down AND field is selected AND hook control handle is down AND normal approach is detected and exterior lites on  OR  Left AND right M/G Weight is on wheels AND M/G down AND arresting hook is not down AND carrier is selected AND normal approach is detected AND exterior lites on AND door switch open AND $\bar{A}$ attk selected AND the test button is depressed OR was depressed when all other condi- tions were satisfied  OR  Left AND right M/G Weight is on wheels AND M/G down AND arresting hook is not down AND field is selected AND hook control handle is down AND normal approach is detected AND exterior lites off AND door switch is open AND $\bar{A}$ attk is selected AND the test button is depressed OR was depressed when all other conditions were satisfied  Note: 209B - Dim Flash - Requires SSFC to go on for ~ 0.6 sec off for ~ 0.2 sec



TABLE III F-14 SUSTAIN BOOLEAN EQUATIONS

1 Table Item #	2 Boolean Equation	3 Transducer List Cross Reference	4 Solid State Controller List Cross Reference	5 Bus/Load Management Priority	6 Special Considerations	7 Reference Drawings	8 Equation Description & Notes
110	FOL 110	NA	110	2	Ess #2	INSPD Fig. 3 Zone 5A, 7A	115 VAC $\phi$ to angle of attack filter and angle of attack indicator = 115 VAC $\phi$ B Ess. #2 Bus energized
120	LAL120 = LAS073 • M1S068 + LAL107	002 102 048 049 050 051 052 053 054 055 056 068 073	120	2	Ess #2	INSPD Fig. 3 Zone 10, 11	High indexer lite drive = lts selected on the master test panel AND test selector switch depressed OR (See LAL107A, B, C, & D)
121	LAL121 = LAS073 • M1S068 + LAL108	002 102 048 049 051 052 054 055 056 057 068 073	121	2	Ess #2	INSPD Fig. 3 Zone 10, 11	Low indexer lite drive = lts selected on the master test panel AND test selector switch depressed OR (See LAL108A, B, C, D)
122	LAL122 = LAS073 • M1S068 + LAL109	002 102 048 049 050 051 052 054 055 056 058 068 073	122	2	Ess #2	INSPD Fig. 3	Normal indexer lite drive = lts selected on the master test panel AND test selector switch depressed OR (See LAL109A, B, C, D)

TABLE III F-14 SUSTEL BOOLEAN EQUATIONS

1 Table Item #	2 Boolean Equation	3 Transducer List Cross Reference	4 Solid State Controller List Cross Reference	5 Bus/Load Management Priority	6 Special Considerations	7 Reference Drawings	8 Equation Description & Notes
123	FD1123	NA	123	2	Eas #2	INSD Fig. 3 Zone 7C	Angle of attack indicator 28 VDC = 28 VDC Eas. No. 2 Bus energized

FIGURE 4 SHEET 1

TABLE II F-14 SOLID STATE POWER CONTROLLERS AND DRIVERS

1 Table Item #	2 Type of Power Controller	3 Rating V & I	4 Associated Loads	5 Duty Cycle	6 Load Power Dissipation	7 P.C. Location	8 Conventional Devices Being Replaced	9 Operational Address	10 Identifier Code	11 Reference Drawings	12 Associated Boolean Equations
027	AC - 1 Pole	V = 115VAC I = 5A	a) Right AICS Total Temperature Probe (32A9) Heater b) Right AICS Angle of Attack Probe (01A4) Heater				CB3 (10A) R-AICS HTR (35A1)	04Q31	HAL027	INSFD, Fig. 4 Zone 1A, 2A, 3A, 4A	027
028	AC - 1 Pole	V = 115VAC I = 5A	a) Left AICS Angle of Attack Probe (01A3) Heater b) Left AICS Total Temperature Probe (05A2)				CB6 (5A) L-AICS HTR (35A1) CB6 (7.5A) AML ATTK Total Temp. HTR (35A4)	01Q42	HAL028	INSFD Fig. 4 Zone 3C	028
029	AC - 1 Pole	V = 115VAC I = 5A	Left Air Inlet Control Programmer (32A6) 115 VAC 6C				CB3 (5A) L-AICS (35A6)	01Q24	KAL029	INSFD Fig. 4 Zone 1C, 2C, 3C, 9C	029
030	AC - 1 Pole	V = 115VAC I = 5A	Right Air Inlet Control Programmer (32A7) 115 VAC 6B				CB2 (5A) R-AICS (35A6)	05Q30	KAL030	INSFD Fig. 4 Zone 1C, 2C, 3C, 13C	030

TABLE III. P-14 SUSTAIN ROULEAN EQUATIONS

FIGURE 4 SHEET

1 Table Item #	2 Boolean Equation	3 Transducer List Cross Reference	4 Solid State Controller List Cross Reference	5 Bus/Load Management Priority	6 Special Considerations	7 Reference Drawings	8 Equation Description & Notes
027	$HAL027 = HBS006 + HBS007 + GHS002 + GHS102$	002 006 102 007	027	3	R. Main	INSFD, Fig. 4 1A, 2A, 3A, 4A	Right AICS Total Temperature Probe (22A9) Heater and the Right AICS Angle of Attack Probe (01A4) Heater are on if the engine/Probe Anti-ice switch is in <u>ONLINE</u> or if in the Auto Position and Left or Right <u>MUG</u> weight is not on wheels.
028	$HAL028 = HBS006 + HBS007 + GHS002 + GHS102$	002 006 102 007	028	3	R. Main	INSFD Fig. 4 1A, 2A, 3A, 4C	Left AICS Total Temperature Probe (05A2) Heater and the Left AICS Angle of Attack Probe (01A3) Heater is on if the engine/Probe Anti-ice switch is in <u>ONLINE</u> or if in the Auto Position and Left or Right <u>MUG</u> weight is not on wheels.
029	$KAL029 = XAS003 + XAS004 + HBS005$	003 004 005	029	2	Ess. No. 2	INSFD Fig. 4 1C, 2C, 3C, 9C	Left Air Inlet Control Programmer 115 VAC #C is on if the Right Main AC PWR is on line or the Left Main AC PWR is on line or the ground cooling pressure interlock switch is <u>high</u> .
030	$KAL030 = XAS003 + XAS004 + HBS005$	003 004 005	030	2	Ess. No. 2	INSFD Fig. 4 1C, 2C, 3C 13C	Right Air Inlet Control Programmer 115 VAC #B is on if the Right Main AC PWR is on line or the Left Main AC PWR is on line or the ground cooling pressure interlock switch is <u>high</u> .

TABLE I. F-14 SATEL SIGNAL TRANSDUCERS

FIGURE 2. SHEET 1

1 Serial Item #	2 Signal Name/Function	3 Identifier Code	4 Signal Source Box Identification	5 Point of Origin	6 Transducer Type	7 Present Signal Characteristics	8 Associated Loads	9 Conventional Switches Being Replaced or Deleted	10 Operational Address	11 Reference Drawings	12 Associated Boolean Equation	13 Conditioning Technique
007	Throttle Mode Switch - Boost/ Auto	QES017	Inlet Ramps/Eng. Crank/Throttle Control Panel (710A1)	Pilots Left Side Console STA225	Toggle Switch/Relay	Boost/Auto = 115VAC Manual = Open	a) Throttle Control Com- puter (21A1) b) L. Horiz Stabilizer Pos. XM1TR (64Bc) c) R. Horiz Stabilizer Pos. XM1TR (64B1)	N/A	01P12	INSPD Fig. 5 Zone 1A	031 113 114 115	Resistor Divider Adapter
009	Auto Initiate (28 VDC)	QES059	Throttle Control Computer (21A1) (Auto Initiate signal)	STA225	N/A	Auto Initiate = 28 VDC Auto Initiate = 28 VDC	Throttle Control Computer (21A1) (Auto Initiate Signal)	N/A	07D01	INSPD Fig. 5 Zone 3C	031 112 115	External Signal Adapter (28 VDC Voltage Sense)
000	No Friction	QES060	P/O Throttle Quadrant (711A1) Friction Lock	Pilots Left Side Console STA 225	Limit Switch	No Friction = 28 VDC Friction = Open	Throttle Control Computer (21A1) (Auto Initiate Signal)	N/A	01P13	INSPD Fig. 5 Zone 4C	031 112 115	Resistor Divider Adapter
001	R. Throttle Lever - 8 LBS	QES061	P/O Throttle Quadrant (711A1) Throttle Lever	Pilots Left Side Console STA225	Limit Switch	Switched 28 VDC	Throttle Control Computer (21A1) (Auto Initiate Signal)	N/A	01P14	INSPD Fig. 5 Zone 4C	031 112 115	Resistor Divider Adapter
002	L. Throttle Lever - 8 LBS	QES062	P/O Throttle Quadrant (711A1) Throttle Lever	Pilots Left Side Console STA225	Limit Switch	Switched 28 VDC	Throttle Control Computer (21A1) (Auto Initiate Signal)	N/A	01P15	INSPD Fig. 5 Zone 4C	031 112 115	Resistor Divider Adapter



TABLE I F-14 SUSTEL SIGNAL TRANSDUCERS

1 Table Item #	2 Signal Name/Function	3 Identifier Code	4 Signal Source Box Identification	5 Point of Origin	6 Transducer Type	7 Present Signal Characteristics	8 Associated Loads	9 Conventional Switches Being Replaced or Deleted	10 Operational Address	11 Reference Drawings	12 Associated Boolean Equation	13 Conditioning Technique
063	$6^0 < \text{MIL Left}$	QES063	MIL Limit Switch P/O Left Throttle Control Actuator (21A7)	Pilots Left Side STA225	Limit Switch	$6^0 < \text{MIL} = 28\text{VDC}$ MIL Limit - Open	Throttle Control Computer (21A1) (Engage Auto Signal)	N/A	OIP16	WESFD Fig. 3 Zone 3C	O31 112 115	Resistor Divider Adapter
064	$6^0 > \text{Idle Left}$	QES064	Idle Limit Switch P/O Left Throttle Control Actuator (21A7)	Pilots Left Side Console STA225	Limit Switch	$6^0 > \text{Idle} = 28\text{VDC}$ Idle Limit - Open	Throttle Control Computer (21A1) (Engage Auto Signal)	N/A	OIP17	WESFD Fig. 3 Zone 3C	O31 112 115	Resistor Divider Adapter
065	$6^0 > \text{Idle Right}$	QES065	Idle Limit Switch P/O Right Throttle Control Actuator (21A7)	Pilots Left Side Console STA225	Limit Switch	$6^0 > \text{Idle} = 28\text{VDC}$ Idle Limit - Open	Throttle Control Computer (21A1) (Engage Auto Signal)	N/A	OIP18	WESFD Fig. 3 Zone 3B	O31 112 115	Resistor Divider Adapter
066	$6^0 < \text{MIL Right}$	QES066	MIL Limit Switch P/O Right Throttle Control Actuator (21A7)	Pilots Left Side Console STA225	Limit Switch	$6^0 < \text{MIL} = 28\text{VDC}$ MIL Limit - Open	Throttle Control Computer (21A1) (Engage Auto Signal)	N/A	OIP19	WESFD Fig. 3 Zone 3B	O31 112 115	Resistor Divider Adapter
067	FLT Gear DN	MJS067	Master Test Panel (73A1)	Pilots Right Side Console STA225	12 Position Rotary Switch with Master- tary Push Button	28 VDC Switched	APC Test K6 Relay (Left Glove Relay Box 77A1)	12 Position Rotary with Push Test	QEP12	WESFD Fig. 5 Zone 1C	O31 112 115	Solid State
068	Test Selector	MJS068	Master Test Panel (73A1)	Pilots Right Side Console STA225	12 Position Rotary with Push Test	28 VDC Switched	APC Test K6 Relay (Left Glove Relay Box 77A1)	12 Position Rotary with Push Test	QEP13	WESFD Fig. 5 Zone 1C	O31 244 721 112 243 722 115 504 723 259 527 724 260 312 725 261 313 726 969 592 587 570 582 578 586 579 585	Solid State

TABLE 1 F-14 SUGTEL SIGNAL TRANSDUCERS

FIGURE 5 SHEET 3

1 Table Item #	2 Signal Name/Function	3 Identifier Code	4 Signal Source Box Identification	5 Point of Origin	6 Transducer Type	7 Present Signal Characteristics	8 Associated Loads	9 Conventional Switches Being Replaced or Deleted	10 Operational Address	11 Reference Drawings	12 Associated Boolean Equation	13 Conditioning Technique
069	Left Torque Limit Not	QK3069	F/O Left Throttle Control Actuator (21A7)	Pilots Left Side Console STA225	Limit Switch	28 VDC Switched	Throttle Control Computer (21A1)	N/A	OIP20	IMSFD Fig. 5 Zone 3C	115 116	Resistor Divider Adapter
070	Right Torque Limit Not	QK3070	F/O Right Throttle Control Actuator (21A7)	Pilots Left Side Console STA225	Limit Switch	28 VDC Switched	Throttle Control Computer (21A1)	N/A	OIP21	IMSFD Fig. 5 Zone 3C	115 116	Resistor Divider Adapter

TABLE II. P-14 SOLID STATE POWER CONTROLLERS AND DRIVERS

1	2	3	4	5	6	7	8	9	10	11	12
Table Item #	Type of Power Controller	Rating V & I	Associated Loads	Duty Cycle	Load Power Dissipation	P.C. Location	Conventional Devices Being Replaced	Operational Address	Identifier Code	Reference Drawings	Associated Boolean Equations
031	AC - 1 Pole	N = 115VAC I = 5A	a) Throttle Control Computer (21A1) Power Supply 115 VAC 5A b) Left Horizontal Stabilizer Position Transmitter (64B2) c) Right Horizontal Stabilizer Position Transmitter (64B1)				CE7 (5A) Auto Throttle AC (35A5) Mode Switch - Auto/Boost - Manual (P/O Inlet Ramps/Eng. Crank Throttle Control Panel 710A1)	01Q14 11Q29	QXL031	INSFD Fig. 5 Zone 1A, 3A, 3B, 5C, 9C	031
112	DC - 1 Pole (Possibly Solid State Enable Driver)	N = 28 VDC	Engine Auto (28 VDC) Throttle Control Computer (21A1)				MLG HIC C K1 Relay APC Test K6 Relay MLG Safety H K22 Relay (Left Glove Relay Box 773A1)	04D03	QXL112	INSFD Fig. 5 Zone 2B, 5C	112
113	DC - 1 Pole (Possibly Solid State Enable Driver)	N = 28 VDC	Boost Enable (28 VDC) Throttle Control Computer (21A1)				CB45 (5A) 28 VDC - Auto Throt DC (35A4)	04D04	QXL113	INSFD Fig. 5 Zone 1B, 5B	113
114	DC - 1 Pole (Possibly Solid State Enable Driver)	N = 28 VDC	Throttle Control Computer (21A1) - MCM (28 VDC)				K21 MLG Safety E (Left Glove Relay Box 773A1)	04D05	QXL114	INSFD Fig. 5 Zone 1B, 4A, 5C	114
115	DC - 1 Pole (Possibly Solid State Enable Driver)	N = 28 VDC	Auto Enable (28 VDC) Throttle Control Computer (21A1)					04D06	QXL115	INSFD Fig. 5 Zone 1B, 2B, 5C	115
116	DC or Open (Solid State Driver)	28V or Open	Auto Ground Interlock P/O Throttle Control Computer Logic (21A1)					04D07	QXL116	INSFD Fig. 5 Zone 1B, 3B, C, 5C	116

TABLE III P-14 SYSTEM BOOLEAN EQUATIONS

1 Table Item #	2 Boolean Equation	3 Transducer List Cross Reference	4 Solid State Controller List Cross Reference	5 Bus/Load Management Priority	6 Special Considerations	7 Reference Drawings	8 Equation Description & Notes
031	$QK031 = Q85017$	017	031	3	Left Main	INSPD Fig. 5 Zone 1, 2, 3, 4, 5C	115 VAC 6A to the Throttle Control Computer and the Left and Right Horizontal Stabilizer Position Transmitter = the Throttle Mode Switch in the Boost/Auto Position
112	$QK112 = Q85059 \bullet$ $Q85060 \bullet Q85061 \bullet$ $Q85062 \bullet (Q85063 \bullet$ $Q85102) \bullet Q85067 \bullet$ $Q85102 \bullet M85067 \bullet$ $M85068 \bullet Q85069 \bullet$ $Q85063 \bullet Q85064 \bullet$ $Q85065 \bullet Q85066$	002 052 102 059 060 061 063 064 065 066 067 068		2	AFCS	INSPD Fig. 5 Zone 1, 2, 3, 4 5C	Throttle Control Computer - Engage Auto 28 VDC = Auto Initiate and Throttle Lock-No Friction and R Throttle - 8 LBS and L Throttle - 8 LBS and Left or Right weight is on wheels and Master Test - FLT Gear DN is selected and Master Test - Test Selector is depressed and Depressed and MLG HDL is down and Left Throttle is at $60 < \text{and } 60 > \text{Idle and Right Throttle is at } 60 > \text{Idle and } 60 \text{ MIL.}$
113	$QK113 = Q85017$		113	2	AFCS	INSPD Fig. 5 Zone 1, 5C	Boost enable 28 VDC to Throttle Control Computer = the Throttle Mode Switch in the Boost/Auto Position
114	$QK114 = Q85017$ $Q85062 \bullet Q85102$	002 102 017	114	2	AFCS	INSPD Fig. 5 Zone 1B, 2B, 4A, 5C	Throttle Control Computer W04 = the Throttle Mode Switch in the Boost/Auto Position and Left and Right MLG Weight is on wheels
115	$QK115 = Q85017 \bullet$ $Q85059 \bullet Q85060 \bullet$ $Q85062 \bullet Q85063 \bullet$ $Q85102 \bullet (Q85062 \bullet$ $Q85102) \bullet M85067 \bullet$ $M85068 \bullet Q85069 \bullet$ $Q85063 \bullet Q85064 \bullet$ $Q85065 \bullet Q85066 \bullet$ $Q85067 \bullet Q85070$	002 102 017 052 059 060 061 062 063 064 065 066 067 068 070	115	2	AFCS	INSPD Fig. 5 Zone 1B, 2B, 5C	Throttle Control Computer - Auto Enable (28 VDC) = Throttle Mode Switch in Boost/Auto and Auto Initiate and Throttle Lock-No Friction and R Throttle - 8 LBS and L Throttle - 8 LBS and Left or Right weight is not on wheels and Master Test - FLT Gear DN is selected and Master Test - Test Selector is depressed and MLG HDL is down and Left Throttle is at $60 < \text{MIL and } 60 > \text{Idle and Right Throttle is at } 60 > \text{Idle and } 60 < \text{MIL and } 60 < \text{MIL and Left Throttle-Torque Limit not and Right Throttle-Torque Limit not.}$

TABLE III F-14 SCOTM BOOLEAN EQUATIONS

1 Table Item #	2 Boolean Equation	3 Transducer List Cross Reference	4 Solid State Controller List Cross Reference	5 Bus/Load Management Priority	6 Special Considerations	7 Reference Drawings	8 Equation Description & Notes
116	QK1116 = QMS069 * QMS070	069 070	116	2	AFCS	148FED Fig. 5 Zone 1B, 2B, 3C, 5C	Auto Ground Interlock to Throttle Control Computer = Left and Right Throttle-Torque Limit Switch Not



TABLE II F-4J SOLID STATE POWER CONTROLLERS AND DRIVERS

1 Table Item #	2 Type of Power Controller	3 Rating V & I	4 Associated Loads	5 Duty Cycle	6 Load Power Dissipation	7 P.C. Location	8 Conventional Devices Being Replaced	9 Operational Address	10 Identifier Code	11 Reference Drawings	12 Associated Boolean Equations
032	AC - 1 Pole	V = 115VAC IB = 3 Amp I = 3 Amp	Mach Lever Control Unit (46A1) Power Supply #1	100%			CB16 (SA) R Fuel Contr/ Mach LVR (35A6)	09437	QCLO32	INSFD Fig. 6 Zone 1B, 10C	032
033	AC - 1 Pole	V = 115VAC IB = 3 A I = 3 A	Mach Lever Control Unit (46A1) Power Supply #2	100%			CB18 (SA) L Fuel Contr/ Mach LVR (35A6)	09438	QCLO33	INSFD Fig. 6 Zone 1B, 10C	033
034	AC - 1 Pole	V = 115VAC IB = 5 Amp I = 5 Amp	a) Right Engine Turbine Temperature Limiter b) Left Engine Turbine Temperature Limiter c) See MAVAIR 01- F-14AAA-2-2-9	100%			CB19 (SA) R PH A Test/ Gas Temp LIM (35A1)	09403 10002	EBLO34	INSFD Fig. 6 Zone 1B, 13C, 17C	034
035	AC - 1 Pole	V = 115VAC IB = 5A I = 5A	a) Right Engine Turbine Temperature Limiter b) Left Engine Turbine Temperature Limiter c) See MAVAIR 01- F-14AAA-2-2-9	100%			CB17 (SA) R PH B Test/ Gas Temp LIM (35A1)	09404 10003	EBLO35	INSFD Fig. 6 Zone 1C, 13C, 17C	035
036	AC - 1 Pole	V = 115VAC IB = 5A I = 5A	a) Right Engine Turbine Temperature Limiter b) Left Engine Turbine Temperature Limiter c) See MAVAIR 01- F-14AAA-2-2-9	100%			CB13 (SA) R PH C Test/ Gas Temp LIM (35A1)	09405 10004	EBLO36	INSFD Fig. 6 Zone 1C, 13C, 17C	036
111	DC - 1 Pole	V = 28 VDC	Mach Lever Control Unit (46A1) - Mach Lever Test 28 VDC	100%			Same as CB32 GND Test/ Mach Lever Bit of Fig. 3	09439	M11111	INSFD Fig. 6 Zone 1C, 10B, INSFD AG-3 Zone 4A	111

TABLE III F-14 SUSTEL BOOLEAN EQUATIONS

1 Table Item #	2 Boolean Equation	3 Transducer List Cross Reference	4 Solid State Controller List Cross Reference	5 Bus/Load Management Priority	6 Special Considerations	7 Reference Drawings	8 Equation Description & Notes
032	QLO32	N/A	032	2	Ess. No. 2 Bus	INSFD Fig. 6 Zone 1B, 10C	Mach Lever Control Unit 115VAC #B Power Supply #1 is - 115VAC #B essential #2 Bus energized
033	QLO33	N/A	033	2	Ess. No. 2 Bus	INSFD Fig. 6 Zone 1B, 10C	Mach Lever Control Unit 115VAC #C Power Supply #2 is - 115VAC #C essential #2 Bus energized
034	EBLO34	N/A	034	3	R. Main Bus	INSFD Fig. 6 Zone 1B, 13C, 17C	Right and Left Engine Turbine Temperature Limiter 115 VAC #A is - 115VAC #A Right Main Bus energized
035	EBLO35	N/A	035	3	R. Main Bus	INSFD Fig. 6 Zone 1C, 13C, 17C	Right and Left Engine Turbine Temperature Limiter 115VAC #B is - 115 VAC #B Right Main Bus energized
036	EBLO36	N/A	036	3	R. Main Bus	INSFD Fig. 6 Zone 1C, 13C, 17C	Right and Left Engine Turbine Temperature Limiter 115VAC #C is - 115VAC #C Right Main Bus energized
111	MULL11	N/A	111	3	R. Main Bus	INSFD Fig. 6 Zone 1C, 10B	Mach Lever Test 28VDC = 28VDC Right Main Bus energized.

TABLE 1. F-14 SUSTAIN SIGNAL TRANSDUCERS

1 Table Item #	2 Signal Name/Function	3 Identifier Code	4 Signal Source Box Identification	5 Point of Origin	6 Transducer Type	7 Present Signal Characteristics	8 Associated Loads	9 Conventional Switches Being Replaced or Deleted	10 Operational Address	11 Reference Drawings	12 Associated Boolean Equation	13 Conditioning Technique
074	Radar Beacon - Off	TFS074	Radar Beacon Con- trol Panel (1942)	NFO's Right Side Console STA 300	DPTT Toggle Switch	Off = Open On/STUDY = 28VDC	Beacon - Receiver Transmitter (1941)	N/A	OTD02	1465FD Fig. 7 Zone 5	124	External Signal Adapter
075	ACLS Selected	TFS075	Radar Beacon Control Panel (1942)	NFO's Right Side Console STA 300	TP/T Rotary Switch	ACLS = 28 VDC ACLS = Open	Beacon ALIGNMENT (1944)	N/A	OTD03	1465FD Fig. 7 Zone 5	125	External Signal Adapter

FIGURE 7. SHEET 1

TABLE II. P-14 SOLID STATE POWER CONTROLLERS AND DRIVERS

1 Table Item #	2 Type of Power Controller	3 Rating V & I	4 Associated Loads	5 Duty Cycle	6 Load Power Dissipation	7 P.C. Location	8 Conventional Devices Being Replaced	9 Operational Address	10 Identifier Code	11 Reference Drawings	12 Associated Boolean Equations
037	AC - 1 Pole	V = 115VAC I = 3A	ILS Decoder (86A2)	100%			CB26 (3A) ILS ARA-63 PHA (35A2)	01Q47	RALO37	IMSFD Fig. 7 Zone 1C, 2C	037
038	AC - 1 Pole	V = 115VAC I = 3A	ILS Decoder (86A2)	100%			CB29 (3A) ILS ARA-63 PB (35A4)	01Q48	RALO38	IMSFD Fig. 7 Zone 1C, 2C	038
039	AC - 1 Pole	V = 115VAC I = 3A	ILS Decoder (86A2)	100%			CB30 (3A) ILS ARA-63 PB (35A4)	01Q49	RALO39	IMSFD Fig. 7 Zone 1C, 2C	039
040	DC - 1 Pole	V = 28VDC I = 3A	ILS Decoder (86A2)	100%			CB47 (3A) ILS ARA-63 DC (36A21)	01Q29	RALO40	IMSFD Fig. 7 Zone 1C, 2C	040
124	DC - 1 Pole	V = 28VDC I = 3 A	Beacon Receiver - Transmitter (19A1)				CB21 (3A) APM-154 (36A21)	01Q15	TP1124	IMSFD Fig. 7 Zone 1C, 5, 7A	124
125	DC - 1 Pole	V = 28VDC	Beacon Augmenter (19A4)				Same as Above (Item 124)	04Q09	TP1125	IMSFD Fig. 7 Zone 1C, 5, 8C	125

TABLE III. P-14 SSTEL BOOLEAN EQUATIONS

1 Table Item #	2 Boolean Equation	3 Transducer List Cross Reference	4 Solid State Controller List Cross Reference	5 Bus/Load Management Priority	6 Special Considerations	7 Reference Drawings	8 Equation Description & Notes
037	RAL037	N/A	037	2	Ess. No. 2 Bus	IWSFD Fig. 7 Zone 1C, 2C	* ILS Decoder 115VAC #A 1s = 115VAC #A Essential #2 Bus energized
038	RAL 038	N/A	038	2	Ess. No. 2 Bus	IWSFD Fig. 7 Zone 1C, 2C	* ILS Decoder 115VAC #B 1s = 115VAC #B Essential #2 Bus energized
039	RAL039	N/A	039	2	Ess. No. 2 Bus	IWSFD Fig. 7 Zone 1C, 2C	* ILS Decoder 115VAC #C 1s = 115VAC #C Essential #2 Bus energized
040	RAL040	N/A	040	2	Ess. No. 2 Bus	IWSFD Fig. 7 Zone 1C, 2C	* ILS Decoder 28VDC 1s = 28VDC Essential #2 Bus energized
124	TP1124 = TP5074	074	124	2	Ess. No. 2 Bus	IWSFD Fig. 7 Zone 1C, 5, 7A	* Could Be 4 Pole SSFC Beacon Receiver - Transmitter 28VDC = Radar Beacon Control Panel PWR Switch not in the Off Position
125	TP1125 = TP5074 • TP5075	074 075	125	2	Ess. No. 2 Bus	IWSFD Fig. 7 Zone 1C, 5, 8C	Beacon Augmenter 28VDC = Radar Beacon Control Panel PWR Switch not in the Off Position and ACIS selected



FIGURE 8 SHEET 1

TABLE I F-14 SATEL SIGNAL TRANSDUCERS

1 Table Item #	2 Signal Name/Function	3 Identifier Code	4 Signal Source Box Identification	5 Point of Origin	6 Transducer Type	7 Present Signal Characteristics	8 Associated Loads	9 Conventional Switches Being Replaced or Deleted	10 Operational Address	11 Reference Drawings	12 Associated Boolean Equation	13 Conditioning Technique
006	Cryptographic Unit - On	HF3008	KY-28 Control Panel (12A2)	NFO Right Side Con- sole STA 300	3-Position Rotary Switch	On = 28 Off = Open	Cryptographic Unit (12A1) 28V Power	DPT Rotary Switch	04P02	IMSFD Fig. 8 Zone 21A	047	Solid State
009	Cryptographic Unit - Relay	HF3009	KY-28 Control Panel (12A2)	NFO Right Side Con- sole STA 300	3-Position Rotary Switch	Relay = GND Relay = Open	Cryptographic Unit (12A1) Relay Con- trol	Same as (above)	04P03	IMSFD Fig. 8 Zone 21A	048	Solid State
010	Cryptographic Unit - Plain	HF3010	KY-28 Control Panel (12A2)	NFO Right Side Con- sole STA 300	SPDT Toggle Switch	Plain = 28VDC Cipher = GND	Cryptographic Unit (12A1) Plain/Cipher Control	SPDT Toggle Switch	04P04	IMSFD Fig. 8 Zone 21A	049	Solid State
011	Cryptographic Unit - Zeroize	HF3011	KY-28 Control Panel (12A2)	NFO Right Side Con- sole STA 300	Push Button Latching	Zeroize = +28VDC Zeroize = Open	Cryptographic Unit (12A1) Zeroize/ Zeroize Con- trol	Push Button Momentary	04P05	IMSFD Fig. 8 Zone 21A	050	Solid State

FIGURE 8 SHEET 1

TABLE II P-14 SOLID STATE POWER CONTROLLERS AND DRIVERS

1 Table Item #	2 Type of Power Controller	3 Rating V & I	4 Associated Loads	5 Duty Cycle	6 Load Power Dissipation	7 P.C. Location	8 Conventional Devices Being Replaced	9 Operational Address	10 Identifier Code	11 Reference Drawings	12 Associated Boolean Equations
0A1	DC - 1 Pole	V = 28VDC I = 7.5A	1) Main UHF Antenna Switch (15S1) 2) Main UHF Receiver- Transmitter (15A3)	100%			CB13 (7.5A) UHF COM ANT (36A1)	0A032 01Q51	RIL041	INSPD Fig. 8 Zone 1A, 11C, 23B	0A1
0A2	DC	V = 28VDC I = 3A	1) Main UHF Antenna Selector (15A4) 2) Pilot Comm/NAV CMD Panel (721A1) 3) Cockpit Relay Box (757A1)	100%			CB5 (3A) UHF Cont (36A1)	0A033	RIL042	INSPD Fig. 8 Zone 1A, 9C, 10C, 12C	0A2
0A3	DC	V = 28VDC I = 5A	1) NFO UHF Remote Indicator (15A6) 2) Pilot UHF Re- mote Indicator (15A5)	100%			CB27 (5A) 1U758 (36A1)	02D23	RIL043	INSPD Fig. 8 Zone 1A, 7C, 10B	0A3
0A4	DC	V = 28VDC I = 3A	Pilot ICS Control Panel (06A1)	100%			CB1 (3A) Pilot ICS (36A1)	03Q08	RIL044	INSPD Fig. 8 1A, 10C	0A4
0A5	DC	V = 28VDC I = 3A	NFO ICS Control Panel (06A2)	100%			CB2 (3A) NFO ICS (36A1)	03Q09	RIL045	INSPD Fig. 8 Zone 1A, 19B	0A5
0A6	DC	V = 28VDC I = 3A	1) Amplifier - Relay Assembly (04A1) 2) UHF Auxiliary Receiver (16A1)	100%			CB28 (3A) ARA-50/ARB- 09 (36A2)	01Q50	RIL046	INSPD Fig. 8 Zone 1B, 19B, 21B	0A6
0A7	DC - 1 Pole	V = 28VDC I = 5 Amp	Cryptographic Unit (15A1) On/Off Con- trol		1.2 Amp		CB29 (5A) Juliet 28 (36A2)	0A034	RIL047	INSPD Fig. 8 Zone 22A, B	0A7
0A8	Solid State Enable Sig- nal Driver	GND or Open	Cryptographic Unit (15A1) (Relay Con- trol)				See Table 1 Item 009	06D01	RIL048	INSPD Fig. 8 Zone 22A, B	0A8

TABLE II P-14 SOLID STATE POWER CONTROLLERS AND DRIVERS

1 Table Item #	2 Type of Power Controller	3 Rating V & I	4 Associated Loads	5 Duty Cycle	6 Load Power Dissipation	7 P.C. Location	8 Conventional Devices Being Replaced	9 Operational Address	10 Identifier Code	11 Reference Drawings	12 Associated Boolean Equations
049	Solid State Relay Driver Signal	28VDC or GND	Cryptographic Unit (12A1) (Plain/Cipher Select)		250 MA Inductive		See Table 1 Item 010	00002	RPL049	INSFD Fig. 8 Zone 22A, B	049
050	Solid State Enable Signal Driver	28VDC Momentary or GND	Cryptographic Unit (12A1) (Zeroize)		0.6 MA		See Table 1 Item 011	0A035	RPL050	INSFD Fig. 8 Zone 22A, B	050
051	AC - 1 Pole Could be 3 Pole See 052 and 053	V = 115VAC I = 3A	Main UHF Receiver - Transmitter (15A3)	100%			CB12 (3A) UHF COM 6A (35A3)	0A036	RIL051	INSFD Fig. 8 Zone 1B, 23B	051
052	AC - 1 Pole See Item 051	V = 115VAC I = 3A	Main UHF Receiver - Transmitter (15A3)	100%			CB8 (3A) UHF COM 6B (35A3)	0A037	RIL052	INSFD Fig. 8 Zone 1B, 23B	052
053	AC - 1 Pole See Item 051	V = 115VAC I = 3A	Main UHF Receiver - Transmitter (15A3)	100%			CB5 (3A) UHF COM 6C (35A3)	0A038	RIL053	INSFD Fig. 8 Zone 1B, 23B	053
054	AC - 1 Pole	V = 115VAC I = 3A	Amplifier - Relay Assembly (04A1)	100%			CB6 (3A) AM/ARA - 50 (35A2)	01Q52	RIL054	INSFD Fig. 8 Zone 1C, 17B	054
055	AC - 1 Pole	V = 26VAC I = 3A	1) UHF/ADF Antenna (04E1) 2) CSDC (07A1)	100%			CB2 (3A) AM/ARA - 4B ANT (35A4)	01Q07 03Q33	RIL055	INSFD Fig. 8 Zone 1C, 17B, 19B	055

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TABLE III F-14 SYSTEM BOOLEAN EQUATIONS

FIGURE 8 SHEET 1

1	2	3	4	5	6	7	8
Table Item #	Boolean Equation	Transducer List Cross Reference	Solid State Controller List Cross Reference	Bus/Load Management Priority	Special Considerations	Reference Drawings	Equation Description & Notes
0A1	R/L0A1	N/A	0A1	1	Ess. No. 1 Bus	INSPD Fig. 8 Zone 1A, 11C, 23B	Main UHF Antenna Switch and Receiver - Transmitter 2B VDC is - 28VDC Essential Bus #1 energized
0A2	RUL0A2	N/A	0A2	1	Ess. No. 1 Bus	INSPD Fig. 8 Zone 1A, 5C, 10C, 12	Main UHF Antenna Selector, and Pilot COM/NAV CMD Panel, and Cockpit Relay Bus, 28VDC - 28VDC Ess. Bus #1 energized
0A3	RUL0A3	N/A	0A3	1	Ess. No. 1 Bus	INSPD Fig. 8 Zone 1A, 7C, 10A	WFO & Pilots UHF Remote Indicator 28VDC - 28VDC Ess. Bus #1 energized
0A4	RZL0A4	N/A	0A4	1	Ess. No. 1 Bus	INSPD Fig. 8 Zone 1A, 14C	Pilot ICS Control Panel 28VDC - 28VDC Ess. Bus #1 energized
0A5	RZL0A5	N/A	0A5	1	Ess. No. 1 Bus	INSPD Fig. 8 Zone 1A, 15B	WFO ICS Control Panel 28VDC - 28VDC Ess. Bus #1 energized
0A6	RZL0A6	N/A	0A6	2	Ess. No. 2 Bus	INSPD Fig. 8 Zone 1B, 15B, 23B	AUF Amplifier Relay Assembly and UHF Auxiliary Receiver 28VDC - 28VDC Ess. Bus #2 energized
0A7	RPL0A7 - RPS008 + RPS009	008 009	0A7	2	Ess. No. 2 Bus	INSPD Fig. 8 Zone 21A, 22A	Cryptographic Unit is Powered On if On or Relay Control Panel Switch Positions are selected
0A8	RPL0A8 - RPS009	009	0A8	2	Ess. No. 2 Bus	INSPD Fig. 8 Zone 21A, 22A	Cryptographic Unit is enabled if Relay Position is selected on the Control Panel
0A9	RPL0A9 - RPS010	010	0A9	2	Ess. No. 2 Bus	INSPD Fig. 8 Zone 21A, 22A	Cryptographic Unit Plain Mode is enabled if Plain Position is selected on the Control Panel
0A9	RPL0A9 - RPS011	011	0A9	2	a) Momentary b) Ess. No. 2 Bus	INSPD Fig. 8 Zone 21A, 22A	Cryptographic Unit Zeroize is enabled momentarily if Zeroize Push Button is depressed on the Control Panel
0A1	RUL0A1	N/A	0A1	1	Ess. No. 1 Bus	INSPD Fig. 8 Zone 23B	Main UHF Receiver - Transmitter 115VAC #A - 115VAC #A essential Bus #1 energized
0A2	RUL0A2	N/A	0A2	1	Ess. No. 1 Bus	INSPD Fig. 8 Zone 23B	Main UHF Receiver - Transmitter 115VAC #B - 115VAC #B essential Bus #1 energized
0A3	RUL0A3	N/A	0A3	1	Ess. No. 1 Bus	INSPD Fig. 8 Zone 23B	Main UHF Receiver - Transmitter 115VAC #C - 115VAC #C essential Bus #1 energized

TABLE III P-14 SATELLITE BOOLEAN EQUATIONS

1 Table Item #	2 Boolean Equation	3 Transducer List Cross Reference	4 Solid State Controller List Cross Reference	5 Bus/Load Management Priority	6 Special Considerations	7 Reference Drawings	8 Equation Description & Notes
054	RILL054	N/A	054	2	Ess. No. 2 Bus	IMSFD Fig. 8 Zone 1C, 19B	Amplifier-Relay Assembly 115VAC = 115VAC Ess. Bus #2 energized
055	RILL055	N/A	055	2	NAV Bus	IMSFD Fig. 8 Zone 1C, 17B, 19B	UBB/ALF Antenna and CSUC 26VAC = 26VAC NAV Bus energized

FIGURE 2 SHEET 1

TABLE 1 F-14 SATEL SIGNAL TRANSDUCERS

1 Table Item #	2 Signal Name/Function	3 Identifier Code	4 Signal Source Box Identification	5 Point of Origin	6 Transducer Type	7 Present Signal Characteristics	8 Associated Loads	9 Conventional Switches Being Replaced or Deleted	10 Operational Address	11 Reference Drawings	12 Associated Boolean Equation	13 Conditioning Technique
012	IFF Enable (28VDC From AM/AM69 to Computer K52 Right Glove Relay Box)	UCS012	AM/AM69	Starboard Side STA 3P5	28VDC Sensing Circuit	28VDC/Open	K52 Computer Relay Right Glove Box	K52 Computer Relay Right Glove Box	07DA4	INSPD Fig. 9 Zone 3B	057	External Signal Adapter
013	Pilot Ejection Switch - Normal	WFS013	Pilot Ejection Switch (0982)	Pilots Left Vertical Console STA225	Squib Actuated Switch	Normal - Open Eject - 28VDC	K39 Relay Zeroize R2 Left Glove Relay Box	Pilot Ejection Switch (0982)	05DA5	INSPD Fig. 9 Zone 1B	058	Resistor Divided Adapter
014	Mode 4 Code Zeroize	SXS014	IFF Transponder	Port Side STA345	IFF Transponder Discrete		Interrogator Computer (10A5)		05DA6	INSPD Fig. 9 Zone 1C	058	External Signal Adapter

FIGURE 9 SHEET 1

TABLE II F-14 SOLID STATE POWER CONTROLLERS AND DRIVERS

2	3	4	5	6	7	8	9	10	11	12
Type of Power Controller	Rating V & I	Associated Loads	Duty Cycle	Load Power Dissipation	P.C. Location	Conventional Devices Being Replaced	Operational Address	Identifier Code	Reference Drawings	Associated Boolean Equations
056 AC - 1 Pole	$V = 115\text{VAC}$ $I = 3\text{A}$	1) Interrogator Switch-Amplifier (10A3) 2) Interrogator Receiver - Transmitter (10A1)	100%			CB8 (3A) 1FF A/A AC (35A5)	01A21	SIL056	INSPD Fig. 9 Zone 3A, 3B, 13A	056
057 DC - 1 Pole	$V = 28\text{VDC}$ $I = 3\text{A}$	1) Interrogator Switch Amplifier (10A3) 2) AAI Control Panel (10A4) 3) Interrogator Synchronizer (10A2) 4) Interrogator Receiver - Transmitter (10A1) Interrogator Computer (10A5)	100%			CB20 (3A) 1FF A/A DC (36A4)	02B24 01A53	SIL057	INSPD Fig. 9 Zone 1A, 3A, 3C, 4B, 7C, 9B, 13B	057
058 Solid State Mode 4 Code Zeroize Generator Sig. Char.						CB6 (3A) APX 72 DC (36A)	0A039	SIL058	INSPD Fig. 9 Zone 1B, 1C, 2C, 7B	058
059 Solid State Enable Signal (MLG Handle Interlock)	END/Open END = Ddn Open = Up	a) 1FF Interrogator b) Crypto Computer (09A5) (MLG Handle Interlock)				CB5 (5A) MLG Handle RLY No. 1 (36A2)	0X003	01L059	INSPD Fig. 9 Zone 1C, 2C, 7B INSPD Fig. 10 Zone 3C, 11C	059

FIGURE 9 SHEET 1

TABLE III P-1A SOSTEL BOOLEAN EQUATIONS

1 Table Item #	2 Boolean Equation	3 Transducer List Cross Reference	4 Solid State Controller List Cross Reference	5 Bus/Load Management Priority	6 Special Considerations	7 Reference Drawings	8 Equation Description & Notes
056	$SXL056$	N/A	056	3	Left Main Bus	DSFD Fig. 9 Zone 1A, 3B, 13A	Interrogator Switch Amplifier and Interrogator Receiver 115VAC $\phi$ - 115VAC $\phi$ Left Main Bus energized
057	$SXL057 = (XAS003 + XAS004 + HNS005) * UCS012$	003 004 005 012	057	3	Left Main Bus	DSFD Fig. 9 Zone 1, 2	28VDC is Applied to the: 1) Interrogator Switch Amplifier (10A3) 2) AAI Control Panel (10A4) 3) Interrogator Synchronizer (10A2) 4) Interrogator Receiver - Transmitter (10A1)
058	$SXL058 = *S013 \bullet$ $SXS014$	013 014	058	1	Ess. No. 1 bus	DSFD Fig. 9 Zone 1C, 2C, 7B	IF (Right Main Generator is On Line <u>OR</u> Left Main Generator is On Line <u>OR</u> Ground Cooling Pressure Switch is High) <u>AND</u> IFF ENABLE Mode A Core Zeroize = Pilot Ejection Switch Normal and Mode A Core Zeroize Signal
059	$GJL059 = GIB052$	052	059	2	Ess. No. 2 bus	DSFD Fig. 9 Zone 1C, 2C, 7B DSFD Fig. 10 Zone 3C, 11C	IFF Interrogator and Cypto Computer MIG Handle Interlock = Landing Gear Handle Down



TABLE 1 P-14 SCOTEL SIGNAL TRANSDUCERS

FIGURE 10 SHEET 1

1 Table Item #	2 Signal Name/Function	3 Identifier Code	4 Signal Source Box Identification	5 Point of Origin	6 Transducer Type	7 Present Signal Characteristics	8 Associated Loads	9 Conventional Switches Being Replaced or Deleted	10 Operational Address	11 Reference Drawings	12 Associated Boolean Equation	13 Conditioning Technique
282	Mode 1 - Enable	SKS282	IFF Control Panel (09A1) (Mode 1 Enable GND)	NFO Right Side Con- sole PS300	N/A	GND = Enable Open = Disable	Transponder Receiver (09A2)	N/A	07D05	INSPD Fig. 10 Zone 8C	382	External Signal Adapter
283	Manual IFF - Emergency - Enable	SKS283	IFF Control Panel (09A1) (Manual IFF Emergency Control GND)	NFO Right Side Con- sole PS300	N/A	GND = Enable Open = Disable	a) CHUC (07A1) b) Trans- ponder Re- ceiver Trans- mitter (09A2)	N/A	07D06	INSPD Fig. 10 Zone 8A	537	External Signal Adapter
284	Mode 2 - Enable	SKS284	IFF Control Panel (09A1) (Mode 2 Enable)	NFO Right Side Con- sole PS300	N/A	GND = Enable Open = Disable	Transponder Receiver (09A2)	N/A	07D07	INSPD Fig. 10 Zone 8B	538	External Signal Adapter
285	Mode 3A - En- able	SKS285	IFF Control Panel (09A1) (Mode 3A Enable)	NFO Right Side Con- sole PS300	N/A	GND = Enable Open = Disable	a) CHUC (07A1) b) Trans- ponder Re- ceiver Transmitter (09A2)	N/A	07D08	INSPD Fig. 10 Zone 8B	398	External Signal Adapter
286	Sensitivity Control - Normal	SKS286	IFF Control Panel (09A1) Sensitivity Control)	NFO Right Side Con- sole PS300	N/A	GND = Normal Open = Low	Transponder Receiver Transmitter (09A2)	N/A	07D09	INSPD Fig. 10 Zone 8A	399	External Signal Adapter
287	Standby Con- trol - Oper- ating	SKS287	IFF Control Panel (09A1) (Standby Control)	NFO Right Side Con- sole PS300	N/A	GND = Operating Open = Standby	Transponder Receiver Transmitter (09A2)	N/A	07D10	INSPD Fig. 10 Zone 8A	400	External Signal Adapter
288	PWR Relay Con- trol - Enable	SKS288	IFF Control Panel (09A1)	NFO Right Side Con- sole PS300	N/A	Enable = GND Disable = Open	Transponder Receiver Transmitter (09A2)	N/A	07D11	INSPD Fig. 10 Zone 8A	401	External Signal Adapter

TABLE II. Full Solid State Power Controllers and Drivers

1 Table Item #	2 Type of Power Controller	3 Rating V & I	4 Associated Loads	5 Duty Cycle	6 Load Power Dissipation	7 P.C. Location	8 Conventional Devices Being Replaced	9 Operational Address	10 Identifier Code	11 Reference Drawings	12 Associated Boolean Equations
060	AC - 1 Pole	V - 115VAC I - 3A	Transponder Re- ceiver Transmitter (0942)	100%			CB1 (3A) APX-72 AC (35A3)	01424	SXL060	INSEPD Fig. 10 Zone 1B, 22C	060
061	DC - 1 Pole	V - 28VDC I - 3A	1) Transponder Test Set (0943) 2) AEC Switching Unit (20A4) 3) JFF Control Panel (0941)	100%			CB6 (3A) APX-72 Test Set (36A4)	02025 01425	SXL061	INSEPD Fig. 10 Zone 22B, 08	061
382	Enable Driver	EMD - Enable Open - Disable	Transponder - Re- ceiver Transmitter (0942) (Node 1 Enable EMD)	100%		N/A	CB6 (3A) APX-72 DC (36A1) P/O K39 Zeroize No. 2 (Right Glove Relay Box 773A1)	04D30	SXL382	INSEPD Fig. 10 Zone 22B, 08 3C, 1C	382
537	Enable Driver	EMD - Enable Open - Disable	a) CSDC (07A1) b) Transponder Receiver - Trans- mitter (0942) (IFF Emergency Con- trol)			N/A	CB6 (3A) APX-72 DC (36A1) P/O K39 Zeroize No. 2 (Right Glove Relay Box 773A1)	04D24 04D31	SXL537	INSEPD Fig. 10 Zone 22B, 11A 0A, 3C, 1C	537
538	Enable Driver	EMD - Enable Open - Disable	Transponder Receiver Transmitter (0942)			N/A	CB6 (3A) APX-72 DC (36A1) P/O K38 Zeroize No. 1 (Left Glove Relay Box 773A1)	04D32	SXL538	INSEPD Fig. 10 Zone 08, 22B, 3C, 1C	538
398	Enable Driver	EMD - Enable Open - Disable	a) CSDC (07A1) b) Transponder Receiver Trans- mitter (0942)			N/A	CB6 (3A) APX-72 DC (36A1) P/O K39 Zeroize No. 1 (Left Glove Relay Box 773A1)	04D25 04D33	SXL398	INSEPD Fig. 10 Zone 22B, 08 3C, 1C	398
399	Enable Driver	EMD - Normal Open - Low	Transponder Receiver Transmitter (0942)			N/A	CB6 (3A) APX-72 DC (36A1) P/O K38 Zeroize No. 1 (Left Glove Relay Box 773A1)	04D34	SXL399	INSEPD Fig. 10 Zone 22B, 0A 3C, 1C	399

FIGURE 10 SHEET 2

TABLE II E-14 SOLID STATE POWER CONTROLLERS AND DRIVERS

1 Table Item #	2 Type of Power Controller	3 Rating V & I	4 Associated Loads	5 Duty Cycle	6 Load Power Dissipation	7 P.C. Location	8 Conventional Devices Being Replaced	9 Operational Address	10 Identifier Code	11 Reference Drawings	12 Associated Boolean Equations
400	Enable Driver	QND = Operating Open = Standby	Transponder Receiver Trans- mitter (09A2)			N/A	CB6 (3A) APX-72 DC (36A1) P/O K36 Zeroize No. 1 (Left Glove Relay Box 773A1)	01D35	SL1A00	INSPD Fig. 10 Zone 22B, 5A, 5C, 1C	400
401	DC - 1 Pole	V = 28VDC	Transponder Re- ceiver Trans- mitter (09A2)	100%			CB6 (3A) APX-72 DC (36A1)	01Q56	SL1A01	INSPD Fig. 10 Zone 1C, 22C	401

TABLE III P-14 SET-POINT RELAY EQUATIONS

FIGURE 10 SHEET 1

1	2	3	4	5	6	7	8
Table Item #	Boolean Equation	Transducer List Cross Reference	Solid State Controller List Cross Reference	Bus/Load Management Priority	Special Considerations	Reference Drawings	Equation Description & Notes
060	SXL060	N/A	060	1	Eas. No. 1 Bus	INSPD Fig. 10 Zone 1B, 2C	Transponder Receiver - Transmitter 115VAC #B - 115VAC #B essential #1 Bus energized
061	SXL061	N/A	061	3	Left Main Bus	INSPD Fig. 10 Zone 1B, 5C, 3B 4B	28VDC is applied to the Transponder Test Set and AUC Switching Unit and IPF Control Panel if the 28VDC Left Main Bus is energized
382	SXL382 = SKS282 + WPS013	013 282	382	3	Left Main Bus	INSPD Fig. 10 Zone 22B, 8B, 3C, 1C	Transponder Receiver Transmitter - Mode 1 Enable - Mode 1-Enable or Pilot Eject-Eject
537	SXL537 = SKS283 + WPS013	013 283	537	1	Eas. No. 1 Bus	INSPD Fig. 10 Zone 22B, 11A, 8A, 3C, 1C	CSDC and Transponder Receiver Transmitter - IPF Emergency Control - Manual IPF Emergency-Enable or Pilot Eject-Eject
538	SXL538 = SKS284 + WPS013	013 284	538	1	Eas. No. 1 Bus	INSPD Fig. 10 Zone 22B, 8B, 3C, 1C	Transponder Receiver Transmitter - Mode 2 Enable - Mode 2 - Enable or Pilot Eject-Eject
398	SXL398 = SKS285 + WPS013	013 285	398	1	Eas. No. 1 Bus	INSPD Fig. 10 Zone 22B, 8B, 3C, 1C	CSDC and Transponder Receiver Transmitter - Mode 3A Enable - Mode 3A - Enable or Pilot Eject-Eject
399	SXL399 = SKS286 + WPS013	013 286	399	1	Eas. No. 1 Bus	INSPD Fig. 10 Zone 22B, 8A, 3C, 1C	Transponder Receiver Transmitter - Sensitivity Control - Sensitivity Control - Normal or Pilot Eject-Eject
400	SXL400 = SKS287	013 287	400	1	Eas. No. 1 Bus	INSPD Fig. 10 Zone 22B, 8A, 3C, 1C	Transponder Receiver Transmitter - Standby Control - Standby Control - Operating or Pilot Eject-Eject
401	AXL401 = SKS288	288	401	1	Eas. No. 1 Bus	INSPD Fig. 10 Zone 1C, 8A, 2C	Transponder Receiver Transmitter - 28VDC and Power Control - PM Relay Control - Enable

FIGURE 11 SHEET 1

TABLE I. F-14 SUSTEL SIGNAL TRANSDUCERS

1 Table Item #	2 Signal Name/function	3 Identifier Code	4 Signal Source Box Identification	5 Point of Origin	6 Transducer Type	7 Present Signal Characteristics	8 Associated Loads	9 Conventional Switches Being Replaced or Deleted	10 Operational Address	11 Reference Drawings	12 Associated Boolean Equation	13 Conditioning Technique
016	HSD/ECMD - OM	TES016	Displays Control Panel (709A1)	Pilots Right Vertical Console STA225	Toggle Switch	On = Open Off = 28VDC	HSP/EKM Dis- play Inter- lock Relay (Aft Cock- pit Relay Box 709A1)	HSD/DMG Switch	Q2P14	INSFD Fig. 11 Zone 1, 2, 3	Q62	Solid State



FIGURE 11. SHEET 1

TABLE II. FALL-SOLID STATE POWER CONTROLLERS AND DRIVERS

1 Table Item #	2 Type of Power Controller	3 Rating V & I	4 Associated Loads	5 Duty Cycle	6 Load Power Dissipation	7 P.C. Location	8 Conventional Devices Being Replaced	9 Operational Address	10 Identifier Code	11 Reference Drawings	12 Associated Boolean Equations
0x2	AC - 3 Pole	V = 115VAC IA = 5A 115VAC IB = 5A 115VAC IC = 5A I = (IA) = 7.5A I = (IB) = 7.5A I = (IC) = 7.5A	Processor (B4A1) (5A, 5B, 5C) HSD Indicator (B4A2) (5A) EOM Display Indicator (B4A3) (5B)				CB55 (7.5A) HSD EOMD 5A (5A5) CB52 (7.5A) HSD EOMD 5B (5A5) CB49 (7.5A) HSD EOMD 5C (5A5) CB53 (5A) Display Power (5A2)	02Q15 02Q16 02Q17 07Q12 07Q13 07Q14	TELO62	INSTR Fig. 11 Zone 1, 2, 3, 17C, 27C, 29C	062

TABLE III. F-14 SUSTAIN BOOLEAN EQUATIONS

1 Table Item #	2 Boolean Equation	3 Transducer List Cross Reference	4 Solid State Controller List Cross Reference	5 Bus/Load Management Priority	6 Special Considerations	7 Reference Drawings	8 Equation Description & Notes
062	$TEL062 = TBS016 \cdot$ $(GIS002 + GIS102 +$ $HNS005 + XAS003 +$ $XAS004)$	016 002 102 005 003 004	062	3	Left Main Bus	IMSPD Fig. 11 Zone 1, 2, 3, 17C, 27C, 29C	Processor 115VAC PA, PB and PC and HSD Indicator 115VAC PA and ECM Display Indicator 115VAC PB - HSD/ECMD Switch On and Left or Right MUG Weight Is not on Wheels or Ground Cooling Switch High or Right Main AC Power On-Line or Left Main Power On Line)

FIGURE 12 SHEET 1

TABLE I F-14 SUGTEL SIGNAL TRANSDUCERS

1 Table Item #	2 Signal Name/Function	3 Identifier Code	4 Signal Source Box Identification	5 Point of Origin	6 Transducer Type	7 Present Signal Characteristics	8 Associated Loads	9 Conventional Switches Being Replaced or Deleted	10 Operational Address	11 Reference Drawings	12 Associated Boolean Equation	13 Conditioning Technique
018	VDI-On	FES018	Displays Control Panel (709A1)	Pilots Right Vertical Console STA225	Toggle Switch (SPDT)	On = Open Off = 28VDC	VDI Inter- lock Relay (APT Cock- pit Relay Box 793A1)	VDI On/Off Switch VDI Interlock Relay (APT Cockpit Relay Box 793A1)	Q2P15	1WSFD Fig. 12 Zone 3	063	Solid State
019	HUD-ON	FES019	Displays Control Panel (709A1)	Pilots Right Vertical Console STA225	Toggle Switch (SPDT)	On = Open Off = 28VDC	HUD Inter- lock Relay (APT Cock- pit Relay Box 793A1)	HUD On/Off Switch HUD Interlock Relay (APT Cockpit Relay Box 793A1) APT 76 MAICS Inter- lock Relay (APT Cock- pit Relay Box 793A1)	Q2P16	1WSFD Fig. 12 Zone 3	064	Solid State

FIGURE 12. SHEET 1

TABLE II. P-10 SOLID STATE POWER CONTROLLERS AND DRIVERS

1 Table Item #	2 Type of Power Controller	3 Rating V & I	4 Associated Loads	5 Duty Cycle	6 Load Power Dissipation	7 P.C. Location	8 Conventional Devices Being Replaced	9 Operational Address	10 Identifier Code	11 Reference Drawings	12 Associated Boolean Equations
063	AC - 3 Pole	V = 115VAC IA, B&C I = 7.5A each	ADI Converter (26A2)				CB11 (7.5A) VDI PH A (35A2) CB25 (7.5A) VDI PH B (35A4) CB15 (7.5A) VDI PH C (35A4)	01Q60 01Q61 01Q62	FEL063	IMSFD Fig. 12 Zone 1	063
064	AC - 3 Pole	V = 115VAC IA, B,C I = 7.5A each	ADI Converter (26A2)				CB8 (7.5A) HUD PH A (35A2) CB22 (7.5A) HUD PH B (35A4) CB13 (7.5A) HUD PH C (35A4)	01Q63 02Q01 02Q02	FEL064	IMSFD Fig. 12 Zone 1	064

TABLE III F-14 SUSTEL BOOLEAN EQUATIONS

1 Table Item #	2 Boolean Equation	3 Transducer List Cross Reference	4 Solid State Controller List Cross Reference	5 Bus/Load Management Priority	6 Special Considerations	7 Reference Drawings	8 Equation Description & Notes
063	FELO63 = FES018 • (XAS003 + XAS004 + HNS005 + GTS002 + GTS102)	018 003 004 005 002 102	063	2	Bus. No. 2 Bus	INSFD Fig. 12 Zone 1, 2, 3, 25C	VDI 115VAC (A, B and C On = VDI Switch on and (Right Main AC PWR on Line or Left Main AC PWR on Line or Ground Cooling Pressure Switch High or Left or Right MLO Weight is not on Wheels
064	FELO64 = FES019 • (XAS003 + XAS004 + HNS005)	019 003 004 005	064	2	Bus. No. 2 Bus	INSFD Fig. 12 Zone 1, 2, 3, 25C	HUD 115VAC (A, B and C On = HUD Switch on and (Right Main AC PWR on Line or Left Main AC PWR on Line or Ground Cooling Pressure Switch High)



TABLE II F-14 SOLID STATE POWER CONTROLLERS AND DRIVERS

1 Table Item #	2 Type of Power Controller	3 Rating V & I	4 Associated Loads	5 Duty Cycle	6 Load Power Dissipation	7 P.C. Location	8 Conventional Devices Being Replaced	9 Operational Address	10 Identifier Code	11 Reference Drawings	12 Associated Boolean Equations
065	DC - 1 Pole	V = 28VDC I = 3A	CSDC (07A1)	100%			CB27 (3A) CSDC (35A2)	01Q29	UCL065	IMSFD Fig. 13 1A, 15A	065
066	AC - 3 Pole	V = 115VAC I <sub>A</sub> , I <sub>B</sub> , I <sub>C</sub>	CSDC (07A1)	100%			CB10 (3A) CSDC I <sub>A</sub> (35A2) CB24 (3A) CSDC I <sub>B</sub> (35A4) CB14 (3A) CSDC I <sub>C</sub> (35A4) KI CSDC Interlock (APT Cockpit Relay Box 793A1)	01Q30 01Q31 01Q32	UCL066	IMSFD Fig. 13 1C, 2, 15A	066

TABLE III. P-14 SOSTEL BOOLEAN EQUATIONS

1 Table Item #	2 Boolean Equation	3 Transducer List Cross Reference	4 Solid State Controller List Cross Reference	5 Bus/Load Management Priority	6 Special Considerations	7 Reference Drawings	8 Equation Description & Notes
065	UCL065	N/A	065	2	Eas. No. 2 Bus	INSFD Fig. 13 Zone 1A, 15A	CSUC +28VDC Essential #2 Bus Energized
066	UCL066 - XAS003 + XAS004 + INS005	003 004 005	066	2	Eas. No. 2 Bus	INSFD Fig. 13 Zone 1, 2, 15A	CSUC 115VAC MA, B and C = Right Main AC PWR On Line or Left Main AC PWR On Line or Ground Cooling Pressure Switch High

FIGURE 14 SHEET 1

TABLE I F-14 SUSTEL SIGNAL TRANSDUCERS

1 Table Item #	2 Signal Name/Function	3 Identifier Code	4 Signal Source Box Identification	5 Point of Origin	6 Transducer Type	7 Present Signal Characteristics	8 Associated Loads	9 Conventional Switches Being Replaced or Deleted	10 Operational Address	11 Reference Drawings	12 Associated Boolean Equation	13 Conditioning Technique
020	GYROS/MSHLD HT - On	RNS020	SYS Test-SYS PAR Panel (79041)	WFO-Left Knee Panel STA300	Toggle Switch	On = Open Off = +28VDC	GYRO Power Relay K36 (Right Glove Relay Box 77241)	GYROS/MSHLD HT Switch GYRO Power of Relay K36	03F08	INSPD Fig. 13 Zone 3C	067	Solid State

FIGURE 14 SHEET 1

TABLE II E-14 SOLID STATE POWER CONTROLLERS AND DRIVERS

1 Table Item #	2 Type of Power Controller	3 Rating V & I	4 Associated Loads	5 Duty Cycle	6 Load Power Dissipation	7 P.C. Location	8 Conventional Devices Being Replaced	9 Operational Address	10 Identifier Code	11 Reference Drawings	12 Associated Boolean Equations
067	AC - 3 Pole	V = 115VAC IA, IB, IC I = 5A each	1) IA, IB and IC - AHS Amplifier (02A1) 2) IA - CSDC - AHS SYNC REF (07A1)				CB3 (5A) QTR0 PWR (35A4) CB9 (5A) AHS IA (35A2) CB23 (5A) AHS IB (35A4) CB12 (5A) AHS IC (35A4) CB7 (7A) Tacan AHS-8A (35A2)	04Q40 01Q39 01Q40 01Q41 01Q08	RML067	INSFD Fig. 14 Zone 1, 2B, 2C, 3C, 5C, 8C, 26A	067
068	AC - 1 Pole	V = 115VAC IA I = 7.5A	1) AHS Amplifiers (02A1) 2) AHS-8A Tacan Receiver Mitter Mount (01A1)	100%					RML068	INSFD Fig. 14 Zone 1A, 6C INSFD Fig. 15 Zone 1A, 9B	068
069	AC - 1 Pole	V = 115VAC IA I = 5A	IMU PWR Supply (06A2)	100%			CB12 (5A) NAV PWR PH A (35A5)	04Q10	RML069	INSFD Fig. 14 Zone 1A, 10B	069
070	AC - 1 Pole	V = 115VAC IB I = 5A	IMU PWR Supply (06A2)	100%			CB10 (5A) NAV PWR SUP PH B (35A5)	04Q11	RML070	INSFD Fig. 14 Zone 1B, 10B	070
071	AC - 1 Pole	V = 115VAC IC I = 5A	IMU PWR Supply (06A2)	100%			CB9 (5A) NAV PWR SUP PH C (35A5)	04Q12	RML071	INSFD Fig. 14 Zone 1B, 10B	071
072	AC - 1 Pole	V = 115VAC IA I = 10A	IMU (06A1)	100%			CB5 (10A) NAV IMU PH A (35A5)	01Q09	RML072	INSFD Fig. 14 Zone 1B, 13A	072
073	AC - 1 Pole	V = 115VAC IB I = 10A	IMU (06A1)	100%			CB3 (10A) NAV IMU PH B (35A5)	01Q10	RML073	INSFD Fig. 14 Zone 1B, 13A	073
074	AC - 1 Pole	V = 115VAC IC I = 10A	IMU (06A1)	100%			CB2 (10A) NAV IMU PH C (35A5)	01Q11	RML074	INSFD Fig. 14 Zone 1B, 13A	074
075	AC - 1 Pole	V = 28VDC I = 10A	a) WFO Caution Advisory Indicator (69- 42A1) b) Pilot Caution Advisory Indica- tor (69A1)	100%			CB30 (10A) AHS PWR (36A2)	07Q15	RML075	INSFD Fig. 14 Zone 2A, 17B	075

FIGURE 14 SHEET 1

TABLE II E-14 SOLID STATE POWER CONTROLLERS AND DRIVERS

1 Table Item #	2 Type of Power Controller	3 Rating V & I	4 Associated Loads	5 Duty Cycle	6 Load Power Dissipation	7 P.C. Location	8 Conventional Devices Being Replaced	9 Operational Address	10 Identifier Code	11 Reference Drawings	12 Associated Boolean Equations
076	DC - 1 Pole	V = 28VDC I = 5A	CSDC (07A1)	100%			CB27 (3A) CSDC (3642) (Same as Fig. 13 Item 005)	01833	UCL076	USED, Fig. 14 Zone 2A, 3A	076



TABLE III F-14 SUSTAIN BOOLEAN EQUATIONS

1 Table Item #	2 Boolean Equation	3 Transducer List Cross Reference	4 Solid State Controller List Cross Reference	5 Bus/Load Management Priority	6 Special Considerations	7 Reference Drawings	8 Equation Description & Notes
067	RNLO67 = RNS020	020	067	2	Ess. No. 2 Bus	1WSFD Fig. 14 Zone 1C, 3C, 2, 3, 6C 26A	115VAC $\phi$ A, B and C to the AHS Amplifier and 115VAC $\phi$ A to the CSIC - AHS SYNC REF = Gyros/WSHLD HT Switch-On
068	RNLO68	N/A	068	2	Ess. No. 2 Bus	1WSFD Fig. 14 Zone 1A, 6C 1WSFD Fig. 15 Zone 1A, 9B	115VAC $\phi$ A to AHS Amplifiers and 115VAC $\phi$ A to the AHS-84 Tacan Receiver - Transmitter mount = 115VAC $\phi$ A Essential #2 Bus energized
069	RNLO69	N/A	069	3	Left Main Bus	1WSFD Fig. 14 Zone 1A, 10B	115VAC $\phi$ A to the IMU PWR Supply = 115VAC $\phi$ A Left Main Bus energized
070	RNLO70	N/A	070	3	Left Main Bus	1WSFD Fig. 14 Zone 1B, 10B	115VAC $\phi$ B to the IMU PWR Supply = 115VAC $\phi$ B Left Main Bus energized
071	RNLO71	N/A	071	3	Left Main Bus	1WSFD Fig. 14 Zone 1B, 10B	115VAC $\phi$ B to the IMU PWR Supply = 115VAC $\phi$ C Left Main Bus energized
072	RNLO72	N/A	072	3	Left Main Bus	1WSFD Fig. 14 Zone 1B, 13A	115VAC $\phi$ A to the IMU = 115VAC Left Main AC Bus energized
073	RNLO73	N/A	073	3	Left Main Bus	1WSFD Fig. 14 Zone 1B, 13A	115VAC $\phi$ A to the IMU = 115VAC Left Main AC Bus energized
074	RNLO74	N/A	074	3	Left Main Bus	1WSFD Fig. 14 Zone 1B, 13A	115VAC $\phi$ A to the IMU = 115VAC $\phi$ A Left Main AC Bus energized
075	BUL075	N/A	075	2	Ess. No. 2 Bus	1WSFD Fig. 14 Zone 2A, 17B	28VDC to the NFO and Pilots Caution Advisory Indicator = 28VDC essential #2 Bus energized
076	UCL076	N/A	076	2	Ess. No. 2 Bus	1WSFD Fig. 14 Zone 2A, 3A	28VDC to the CSIC = 28VDC Essential #2 Bus energized

TABLE I. F-14 SATELLITE SIGNAL TRANSDUCERS

FIGURE 15 SHEET 1

1 Table Item #	2 Signal Name/Function	3 Identifier Code	4 Signal Source Box Identification	5 Point of Origin	6 Transducer Type	7 Present Signal Characteristics	8 Associated Loads	9 Conventional Switches Being Replaced or Deleted	10 Operational Address	11 Reference Drawings	12 Associated Boolean Equation	13 Conditioning Technique
276	Command Speed- Return	F15276	Data Link Converter (13A1)		Enable Signal	GMU/OPEN	Pilot Mach Airspeed Indicator (52K2)	N/A	05D07	INGSD Fig. 15 Zone 33C	377	External Signal Adapter

TABLE II F-4U SOLID STATE POWER CONTROLLERS AND DRIVERS

1 Table Item #	2 Type of Power Controller	3 Rating V & I	4 Associated Loads	5 Duty Cycle	6 Load Power Dissipation	7 P.C. Location	8 Conventional Devices Being Replaced	9 Operational Address	10 Identifier Code	11 Reference Drawings	12 Associated Boolean Equations
078	AC - 1 Pole	V = 115VAC I = 5A	Right Pitot Static Probe Heater (81A2)				CB20 (5A) R Pitot/ Static HTR (35A4)	07Q16	HAL078	INSFD Fig. 15 Zone 2B, 3B, 21B	078
079	AC - 1 Pole	V = 115VAC I = 5A	Left Pitot Static Probe Heater (81A1)				CB21 (5A) L Pitot/ Static HTR (35A4)	03Q10	HAL079	INSFD Fig. 15 Zone 2B, 3B, 21C	079
080	DC - 1 Pole	V = 28VDC I = 3A	Radar Altimeter (03A2)				CB30 (3A) Alt Low Warn (36A1)	03Q11	SAL080	INSFD Fig. 15 Zone 3C, 15C	080
081	AC - 1 Pole	V = 115VAC I = 5A	Radar Altimeter (03A2)	100%			CB10 (5A) Radar Altm (35A3)	03Q12	SAL081	INSFD Fig. 15 Zone 1A, 15B	081
085	AC - 1 Pole	V = 115VAC I = 3A	a) PMS Relay Assembly (27A38)	100%			CB6 (5A) ARC 124 PMA/ ASM 27 (35A5)	03Q13	RNL085	INSFD Fig. 15 Zone 1B, 33C	085
533	AC - 1 Pole	V = 115VAC I = 5A	a) Pilot Standby Attitude Indicator (52A1) b) NFO Standby Attitude Indicator (52A1)				CB7 (5A) STBY ATTU IND PH B (35A3) P/O KIO-STBY Attitude PWR Relay (Left Glove Relay Box 773A1) CT 6 (7.5A) INST Bus FIR (35A4)	07Q17	FDL533	INSFD Fig. 15 Zone 4A, 4B, 3A, 1B, 2C	533

TABLE II. P-14 SOLID STATE POWER CONTROLLERS AND DRIVERS

1 Table Item #	2 Type of Power Controller	3 Rating V & I	4 Associated Loads	5 Duty Cycle	6 Load Power Dissipation	7 P.C. Location	8 Conventional Devices Being Replaced	9 Operational Address	10 Identifier Code	11 Reference Drawings	12 Associated Boolean Equations
534	AC - 1 Pole	V = 115VAC I = 10A	a) Pilot Standby Attitude Indica- tor (52M5) b) NFO Standby Attitude Indica- tor (52M5)				CB11 (5A) STBY ATTD IND PH A (35A3) CB26 (7.5A) INST Bus PDR (35A4) P/O K10-STBY Attitude PDR Relay (Left Glove Relay Box 773A1)	07Q18	FOL534	INSFD Fig. 1- Zone 4A, 4B, 3A, 2C, 1B	534
377	Relay Driver	EMD/Open	Pilot Mach Airspeed Indicator (52M2)				P/O K42-ALT Reliable Relay (Left Glove Relay Box 773A1)	02R26	FLL377	INSFD Fig. 1- Zone 3A, 3A	377
378	AC - 1 Pole	V = 26VAC I = 10A	a) Pilot BHI (01A5) b) NFO BHI (732A1M2)	100%			CB1 (5A) - Tacan/BHI INST PDR	03Q34	FPL378	INSFD Fig. 1- Zone 16, 1C	378
402	DC - 1 Pole	V = 28VDC I = 10A	Rate Gyro Trans- mitter (52A1) 28VDC	100%			CB35 (5A) A/S IND/ BAROALTM DC (36A2)	01Q27	FAL402	INSFD Fig. 1- Zone 2A, 3C	402
403	DC - 1 Pole	V = 28VDC I = 10A	a) Pilot Com/NAV CMD Panel (72A1) b) ABM-B, Tacan Receiver - Transmitter Mount (01A1) c) Pilot BHI (01A5) d) NFO BHI (732A1M2)	100%			CB22 (3A) Tacan, BHI (36A2)	07Q19 03Q14	MUJ403	INSFD Fig. 1- Zone 2A 8A 9B, 15A, 15C	403

TABLE III Full SATEL BOOLEAN EQUATIONS

1 Table Item #	2 Boolean Equation	3 Transducer List Cross Reference	4 Solid State Controller List Cross Reference	5 Bus/Load Management Priority	6 Special Considerations	7 Reference Drawings	8 Equation Description & Notes
078	$HAL078 = HAS006 + [HAS007 \cdot (GIS002 + GIS102)]$	002 102 006 007	078	2	Eas. No. 2 Bus	INSPD Fig. 15 Zone 2B, 3B, 21B	Right Pitot Static Probe Heater is Energized if the ENG/Probe Anti-Ice Switch is in ORIDE Position or (if in the Auto Position and Left or Right MLG Weight is not on Wheels)
079	$HAL079 = HAS006 + [HAS007 \cdot (GIS002 + GIS102)]$	002 102 006 007	079	2	Eas. No. 2 Bus	INSPD Fig. 15 Zone 2B, 3B, 21C	Left Pitot Static Probe Heater is Energized if the ENG/Probe Anti-Ice Switch is in ORIDE Position or if in the Auto Position and Left or Right MLG Weight is not on Wheels
080	SAL080	N/A	080	1	Eas. No. 1 Bus	INSPD Fig. 15 Zone 3C, 19C	Radar Altimeter +28VDC = 28VDC Eas. #1 Bus energized
081	SAL081	N/A	081	1	Eas. No. 1 Bus	INSPD Fig. 15 Zone 1A, 19B	Radar Altimeter 115VAC #B = 115VAC #B Eas. #1 Bus energized
085	RNL085	N/A	085	3	Left Main Bus	INSPD Fig. 15 Zone 1B, 35C	PMG Relay Assembly - (115VAC #A) = 115VAC #A Left Main Bus-Energized
533	FUL533 = ZAS277	277	533	1	Eas. No. 1 Bus	INSPD Fig. 3A Zone 1A, 10A	Pilot and NFO Standby Attitude Indicator 115VAC #B = Inst-On
534	FUL534 = XAS277	277	534	1	a) Eas. No. 1 Bus b) Require 115VAC #A out of Transducer (for Phase Reversal) to Achieve 115V Line to Line	INSPD Fig. 15 Zone 4A, 4B, 3A, 2C, 1B	Pilot and NFO Standby Attitude Indicator 115VAC (180° Shifted #A) = Inst-On
377	FLL377 = FLS278 • FRS517	278 517	377	2	Eas. No. 2 Bus	INSPD Fig. 15 Zone 3A, C 3B, 28B	Pilot Mech Airspeed Indicator - AUC Reliable = Command Speed - Return and AUC Attitude - Reliable



TABLE III P-14 SYSTEM BOOLEAN EQUATIONS

1 Table Item #	2 Boolean Equation	3 Transducer List Cross Reference	4 Solid State Controller List Cross Reference	5 Bus/Load Management Priority	6 Special Considerations	7 Reference Drawings	8 Equation Description & Notes
378	FFL378	N/A	378	2	NAV. Bus	INCFD Fig. 15 Zone 16, 1C	Pilot and NFO BHM - 28VAC $\phi$ A - 28VAC NAV Bus PH A - energized
402	FALL402	N/A	402	2	Ess. No. 2 Bus	INCFD Fig. 15 Zone 2A, 3C	Rate Gyro Transmitter - 28VDC Essential No. 2 Bus - energized
403	RUL403	N/A	403	2	NAV. Bus	INCFD Fig. 15 Zone 2A, 8A 9B, 15A, 15C	Pilot Com/NAV CMD Panel, ADM-SH TACAN RCV-DXTR Mount, Pilot and NFO BHM - 28VDC - 28VDC Essential Bus No. 2 energized

FIGURE 16 SHEET 1

TABLE I F-14 SOSTEL SIGNAL TRANSDUCERS

1 Table Item #	2 Signal Name/Function	3 Identifier Code	4 Signal Source Box Identification	5 Point of Origin	6 Transducer Type	7 Present Signal Characteristics	8 Associated Loads	9 Conventional Switches Being Replaced or Deleted	10 Operational Address	11 Reference Drawings	12 Associated Boolean Equation	13 Conditioning Technique
076	MCB Enable	KCS076	Armament Panel (85A1)	NFO Left Vertical Console STA300	N/A	Enable = 28VDC Enable =	Power Switching Unit (85A2)	And Logic Gate in Power Switching Unit (85A2)	05D08	WSPD Fig. 16 Zone 12C 5B	140 141 193 194	External Signal Adapter
077	Emergency Stores Jet- tison	ANS077	Emerg Stores Jett Push Button Switch (85B2)	Pilots Left Vertical Console STA225	Four Pole Push Button Switch (Momentary Must Contain Logic Lock Up)	Jett = 28VDC Jett = Open	Armament Panel (85A1)	Emerg Stores Jet Push Button Switch (85B2)	01P23	WSPD Fig. 16 Zone 4B	146 149 150 151 153	Solid State
078	ACM (Air Com- bat Maneuver) On	ANS078	ACM Panel (702A1)	Pilots Center Panel STA225	Toggle Switch	ACM - On = 28VDC ACM - Off = Open	Armament Panel (85A1)	ACM Switch (ACM Panel 702A1)	02P17	WSPD Fig. 16 Zone 2A	149 150	Solid State
079	Pulse Enable INTLK (28VDC)	ANS079	Armament Panel (85A1)	NFO Left Vertical Console STA300	N/A	Switched 28VDC	a) ABMT Safety Override Switch (85C3) b) Safety Override Signal (28VDC) to Arm- ment Panel (85A1)		05D09	WSPD Fig. 16 Zone 5B, 4B	157	External Signal Adapter
080	Armament Safety Oride Switch - Enabled	ANS080	Armament Safety Override Switch (85C3)		Toggle Switch (Mechanical Toggle with Electrical Lockup)	Switch 28VDC with Relay Lock Up	Safety Over- ride Signal (28VDC) to Armament Panel (85A1)	Armament Safety Over- ride Switch (85C3)	04P06	WSPD Fig. 16 Zone 4A	153 154 155 156	Solid State
081	ACM JETT	ANS081	ACM JETT. Push Button Switch (ACM Panel 702A1)	Pilots Center Panel STA225	Push Button	Switched 28VDC	Armament Panel (85A1)		00P18	WSPD Fig. 16 Zone 2A	153 154 155 156 157	Solid State

FIGURE 16 SHEET 2

TABLE I P-14 SATELLITE SIGNAL TRANSDUCERS

1 Table Item #	2 Signal Name/Function	3 Identifier Code	4 Signal Source Box Identification	5 Point of Origin	6 Transducer Type	7 Present Signal Characteristics	8 Associated Loads	9 Conventional Switches Being Replaced or Deleted	10 Operational Address	11 Reference Drawings	12 Associated Boolean Equation	13 Conditioning Technique
082	Master Arm - On	ANS082	ACM Panel (702A1)	Pilots Center Panel STA225	Toggle Switch	Switched 28VDC	Armament Panel (05A1)		Q2P19	IMSFD Fig. 16 Zone 2A	156 157	Solid State

FIGURE 16 SHEET 1

TABLE II 2-4 SOLID STATE POWER CONTROLLERS AND DRIVERS

1 Table Item #	2 Type of Power Controller	3 Rating V & I	4 Associated Loads	5 Duty Cycle	6 Load Power Dissipation	7 P.C. Location	8 Conventional Devices Being Replaced	9 Operational Address	10 Identifier Code	11 Reference Drawings	12 Associated Boolean Equations
126	DC - 1 Pole	V = 28VDC I = 7.5A	Power Switching Unit (85A2)	100%			CB33 (7.5A) STAS, 6 and 7 REL PWR A (36A1)	09Q21	AGL126	1MSFD Fig. 16 Zone 1A, B, C	126
127	DC - 1 Pole	V = 28VDC I = 7.5A	Power Switching Unit (85A2)	100%			CB32 (7.5A) STAS, 6 and 7 REL PWR B (36A1)	09Q22	AGL127	1MSFD Fig. 16 Zone 1A, 13C	127
128	DC - 1 Pole	V = 28VDC I = 7.5A	Power Switching Unit (85A2)	100%			CB10 (7.5A) STAS REL PWR A (36A1)	09Q23	AGL128	1MSFD Fig. 16 Zone 1A, 13C	128
129	DC - 1 Pole	V = 28VDC I = 7.5A	Power Switching Unit (85A2)	100%			CB9 (7.5A) STAS REL PWR B (36A1)	09Q24	AGL129	1MSFD Fig. 16 Zone 1A, 13C	129
130	DC - 1 Pole	V = 28VDC I = 7.5A	Power Switching Unit (85A2)	100%			CB35 (7.5A) STAS, 3 and 4 REL PWR A (36A1)	09Q25	AGL130	1MSFD Fig. 16 Zone 1A, 13C	130
131	DC - 1 Pole	V = 28VDC I = 7.5A	Power Switching Unit (85A2)	100%			CB34 (7.5A) STAS, 3 and 4 REL PWR B (36A1)	09Q26	AGL131	1MSFD Fig. 16 Zone 1A, 13C	131
132	DC - 1 Pole	V = 28VDC I = 7.5A	Power Switching Unit (85A2)	100%			CB26 (7.5A) STAS REL PWR A (36A1)	09Q27	AGL132	1MSFD Fig. 16 Zone 1A, 13C	132
133	DC - 1 Pole	V = 28VDC I = 7.5A	Power Switching Unit (85A2)	100%			CB25 (7.5A) STAS REL PWR B (36A1)	09Q28	AGL133	1MSFD Fig. 16 Zone 1B, 8C	133
134	DC - 1 Pole	V = 28VDC I = 7.5A	Power Roll Comp DC Switching Unit (85A2)	100%			CB37 (7.5A) STAS ALM9 REL PWR (36A1)	09Q29	AGL134	1MSFD Fig. 16 Zone 1B, 13C	134
135	DC - 1 Pole	V = 28VDC I = 7.5A	Power Pitch Comp DC Switching Unit (85A2)	100%			CB38 (7.5A) STAS ALM9 REL PWR (36A1)	09Q30	AGL135	1MSFD Fig. 16 Zone 1B, 13C	135
136	DC - 1 Pole	V = 28VDC I = 3A	ACM Panel (702A1)	100%			CB56 (3A) ACM PWR PWR (36A1)	09Q15	AGL136	1MSFD Fig. 16 Zone 1B, 2A	136
137	DC - 1 Pole	V = 28VDC I = 3A	Power Switching Unit (85A2)	100%			CB53 (3A) MLD CPM3N Bypass PWR (36A1)	09Q61	KGL137	1MSFD Fig. 16 Zone 3A, 5C	137
138	DC - 1 Pole	V = 28VDC I = 7.5A	Power Switching Unit (85A2)	100%			CB8 (7.5A) Mech Pulling 3/4 (36A1)	09Q22	AGL138	1MSFD Fig. 16 Zone 3A, 15C	138

FIGURE 16 SHEET 2

TABLE II. F-14 SOLID STATE POWER CONTROLLERS AND DRIVERS

1 Table Item #	2 Type of Power Controller	3 Rating V & I	4 Associated Loads	5 Duty Cycle	6 Load Power Dissipation	7 P.C. Location	8 Conventional Devices Being Replaced	9 Operational Address	10 Identifier Code	11 Reference Drawings	12 Associated Boolean Equations
139	DC - 1 Pole	V = 28VDC I = 7.5A	Power Switching Unit (85A2)	100%			CB7 (7.5A) Mech Fusing 5/6 (36A1)	09Q03	AGL139	IMSFD Fig. 16 Zone 3A, 15C	139
140	DC - 1 Pole	V = 28VDC I = 5A	Right Engine Mid CPFSN Bypass Bleed Control				CB8 (5A) R Mid CPFSN Bypass (36A2) K57 Gun Missile Firing Interlock Relay (Left) Glove Relay Box 773A1	10Q05	KCL140	IMSFD Fig. 16 Zone 1C, 5B 17A, 18A	140
141	DC - 1 Pole	V = 28VDC I = 5A	Left Engine Mid CPFSN Bypass Bleed Control				CB7 (5A) L Mid CPFSN Bypass (36A2)	09Q06	KCL141	IMSFD Fig. 16 Zone 1C, 5B 17A, 18A	141
142	AC - 1 Pole	V = 115VAC I = 3A	a) Power Switching Unit (85A2) b) Armament Panel (85A1)	100%			CB9 (3A) AMG-15 PH A No. 2 (35A3)	02Q05 03Q17	AGL142	IMSFD Fig. 16 Zone 4C, 5C	142
143	AC - 1 Pole	V = 115VAC I = 3A	Power Switching Unit (85A2)	100%			CB13 (3A) AMG 15 PH No. 1 (35A3)	02Q06	AGL143	IMSFD Fig. 16 Zone 4C, 5C	143
144	AC - 1 Pole	V = 115VAC I = 3A	Power Switching Unit (85A2)	100%			CB14 (3A) AMG 15 PH No. 1 (35A3)	02Q07	AGL144	IMSFD Fig. 16 Zone 4C, 5C	144
145	AC - 1 Pole	V = 115VAC I = 3A	Power Switching Unit (85A2)	100%			CB6 (3A) AMG 15 PH No. 2 (35A3)	02Q08	AGL145	IMSFD Fig. 16 Zone 4C, 5C	145
146	AC - 1 Pole	V = 115VAC I = 3A	Power Switching Unit (85A2)	100%			CB15 (3A) AMG 15 PH No. 1 (35A3)	02Q09	AGL146	IMSFD Fig. 16 Zone 4C, 5C	146
147	AC - 1 Pole	V = 115VAC I = 3A	Power Switching Unit (85A2)	100%			CB2 (3A) AMG 15 PH No. 2 (35A3)	02Q10	AGL147	IMSFD Fig. 16 Zone 4C, 5C	147
148	DC - 1 Pole	V = 28VDC I = 7.5A	Armament Panel (85A1)				CB7 (7.5A) Jett No. 2 (36A1) K22 MG Safety B (Right) Glove Relay Box 773A1	02Q07	AGL148	IMSFD Fig. 16 Zone 1B, 3B, 4B, 5B	148



FIGURE 16. SHEET 1

TABLE II. P-4 SOLID STATE POWER CONTROLLERS AND DRIVERS

1 Table Item #	2 Type of Power Controller	3 Rating V & I	4 Associated Loads	5 Duty Cycle	6 Load Power Dissipation	7 P.C. Location	8 Conventional Devices Being Replaced	9 Operational Address	10 Identifier Code	11 Reference Drawings	12 Associated Boolean Equations
149	Enable Driver	V = 28VDC I = 7.5A	Armament Panel (85A1)				CB8 (7.5A) Jett No. 1 (36A1) CB3 (5A) MUG Safety RLY No. 2 (36A1) K22 MUG Safety B (Right Glove Relay Box 772A1)	02D28	AML149	INSFD Fig. 16 Zone 1B	149
150	DC - 1 Pole	V = 28VDC	Armament Panel (85A1)				CB4 (5A) MUG Safety No. 1 (36A1) K31 MUG Safety D (Right Glove Relay Box 772A1)	02D29	AML150	INSFD Fig. 16 Zone 1B, 3B, 4B, 5B	150
151	Lamp Driver	V = 28VDC	DMERG Jett Push Button (85B2)					02D30	AML151	INSFD Fig. 16 Zone 1B, 4B	151
152	DC - 1 Pole	V = 28VDC I = 5 Amp	a) AMG-15 (28VDC) (85A1) b) Power Switch- ing Unit (85A2)	100%			CB31 (5A) AMG-15 DC (36A1)	03Q16	AGL152	INSFD Fig. 16 Zone 2B INSFD Fig. 18 Zone 1B, 1C	152
153	Enable Driver	V = 28VDC	Safety Override (28VDC) Armament Panel (85A1)					02D31	AGL153	INSFD Fig. 16 Zone 5B, 4B, 4A	153
154	Enable Driver	V = 28VDC	MUG HDL DM (28VDC) Master Arm Select (Armament Panel 85A1)				See Fig. IX CB5 (5A) MUG Handle RLY No. 1 (36A2) K1 MUG Handle (Right Glove Relay Box 772A1) CB28 (5A) Master Arm (36A1)	02D32	AGL154	INSFD Fig. 16 Zone 5B, 3C, 2A	154
155	Enable Driver	V = 28VDC	MUG HDL Up (28VDC) Master Arm Select (Armament Panel 85A1)					02D33	AGL155	INSFD Fig. 16 Zone 5B, 3C, 2A	155
156	Enable Driver	V = 28VDC	ACM Jettison Select (28VDC) (Armament Panel 85A1)					02D34	AML156	INSFD Fig. 16 Zone 5B, 3A, 2A	156

TABLE II. P-14 SOLID STATE POWER CONTROLLERS AND DRIVERS

1	2	3	4	5	6	7	8	9	10	11	12
Table Item #	Type of Power Controller	Rating V & I	Associated Loads	Duty Cycle	Load Power Dissipation	P.C. Location	Conventional Devices Being Replaced	Operational Address	Identifier Code	Reference Drawings	Associated Boolean Equations
157	Enable Driven	V = 28VDC	Fuse Enable (28VDC) (Armsament Panel 85A1)				CB4 (3A) M/G Handle RLY No. 2 (35A2) K6 M/G Handle (Right Glove Relay Box 772A1)	Q2D35	AGL157	14SPD Fig. 16 Zone 5B, 2A, 4A	157

TABLE III F-14 SOSTER BOOLEAN EQUATIONS

FIGURE 16 SHEET 1

1	2	3	4	5	6	7	8
Table Item #	Boolean Equation	Transducer List Cross Reference	Solid State Controller List Cross Reference	Bus/Load Management Priority	Special Considerations	Reference Drawings	Equation Description & Notes
126	AGL126	N/A	126	1	Ess. No. 1 Bus	INSFD Fig. 16 Zone 1A, 13C	Station 5, 6 and 7 Release Power A (28VDC) to the Power Switching Unit - 28VDC Ess. No. 1 Bus energized
127	AGL127	N/A	127	1	Ess. No. 1 Bus	INSFD Fig. 16 Zone 1A, 13A	Station 5, 6 and 7 Release Power B (28VDC) to the Power Switching Unit - 28VDC Ess. No. 1 Bus energized
128	AGL128	N/A	128	1	Ess. No. 1 Bus	INSFD Fig. 16 Zone 1A, 13C	Station 8 Release Power A (28VDC) to the Power Switching Unit - 28VDC Ess. No. 1 Bus energized
129	AGL129	N/A	129	1	Ess. No. 1 Bus	INSFD Fig. 16 Zone 1A, 13C	Station 8 Release Power B (28VDC) to the Power Switching Unit - 28VDC Ess. No. 1 Bus energized
130	AGL130	N/A	130	1	Ess. No. 1 Bus	INSFD Fig. 16 Zone 1A, 13C	Station 2, 3 and 4 Release Power A (28VDC) to the Power Switching Unit - 28VDC Ess. No. 1 Bus energized
131	AGL131	N/A	131	1	Ess. No. 1 Bus	INSFD Fig. 16 Zone 1A, 13C	Station 2, 3 and 4 Release Power B (28VDC) to the Power Switching Unit - 28VDC Ess. No. 1 Bus energized
132	AGL132	N/A	132	1	Ess. No. 1 Bus	INSFD Fig. 16 Zone 1A, 13C	Station 1 Release Power A (28VDC) to the Power Switching Unit - 28VDC Ess. No. 1 Bus energized
133	AGL133	N/A	133	1	Ess. No. 1 Bus	INSFD Fig. 16 Zone 1B, 13C	Station 1 Release Power B (28VDC) to the Power Switching Unit - 28VDC Ess. No. 1 Bus energized
134	AGL134	N/A	134	1	Ess. No. 1 Bus	INSFD Fig. 16 Zone 1B, 13C	Station 1 Aim 9 Release Power (28VDC) to the Power Switching Unit - 28VDC Ess. No. 1 Bus energized
135	AGL135	N/A	135	1	Ess. No. 1 Bus	INSFD Fig. 16 Zone 1B, 13C	Station 8 Aim 9 Release Power (28VDC) to the Power Switching Unit - 28VDC Ess. No. 1 Bus energized
136	AGL136	N/A	136	1	Ess. No. 1 Bus	INSFD Fig. 16 Zone 1B, 2A	Air Combat Maneuver Panel (28VDC) - 28VDC Ess. No. 1 Bus energized
137	AGL137	N/A	137	3	Left Main Bus	INSFD Fig. 16 Zone 3A, 5A	Mid Compression Bypass Power (28VDC) to the Power Switching Unit - 28VDC Left Main Bus energized
138	AGL138	N/A	138	3	Left Main Bus	INSFD Fig. 16 Zone 3A, 13C	Mech Fueling STA3 and 4 to the Power Switching Unit - 28VDC Left Main Bus energized

TABLE III - F-14 SUSTAINMENT EQUATIONS

1 Table Item #	2 Boolean Equation	3 Transducer List Cross Reference	4 Solid State Controller List Cross Reference	5 Bus/Load Management Priority	6 Special Considerations	7 Reference Drawings	8 Equation Description & Notes
139	AGL139	N/A	139	3	Left Main Bus	INSPD Fig. 16 Zone 3A, 15C	Mech Fusing STA5 and 6 to the Power Switching Unit - 28VDC Left Main Bus energized
140	KCL140 = KCS076	076	140	2	a) Ess. No. 2 Bus b) Requires 5 Sec Holding after Enable Term Goes False	INSPD Fig. 16 Zone 1C, 5B, 17A, 18A	Right Engine Mid Compression Bypass Bleed Solenoid is energized - MCB Enable
141	KCL141 = KCS076	076	140	2	a) Ess. No. 2 Bus c) Requires 5 Sec Holding After Enable Term Goes False	INSPD Fig. 16 Zone 1C, 5B, 17A, 18A	Left Engine Mid Compression Bypass Bleed Solenoid is energized - MCB Enable
142	ALG142	N/A	142	1	Ess. No. 1 Bus	INSPD Fig. 16 Zone 4C, 5C	ANG-15 115VAC #A No. 2 to the Power Switching Unit and Armament Panel - 115VAC #A Ess. No. 1 Bus energized
143	AGL143	N/A	143	1	Ess. No. 1 Bus	INSPD Fig. 16 Zone 4C, 5C	ANG-15 115VAC #A No. 1 to the Power Switching Unit - 115VAC #A Ess. No. 1 Bus energized
144	AGL144	N/A	144	1	Ess. No. 1 Bus	INSPD Fig. 16 Zone 4C, 5C	ANG-15 115VAC #B No. 1 to the Power Switching Unit - 115VAC #B Ess. No. 1 Bus energized
145	AGL145	N/A	145	1	Ess. No. 1 Bus	INSPD Fig. 16 Zone 4C, 5C	ANG-15 115VAC #B No. 2 to the Power Switching Unit - 115VAC #B Ess. No. 1 Bus energized
146	AGL146	N/A	146	1	Ess. No. 1 Bus	INSPD Fig. 16 Zone 4C, 5C	ANG-15 115VAC #C No. 1 to the Power Switching Unit - 115VAC #C Ess. No. 1 Bus energized
147	AGL147	N/A	147	1	Ess. No. 1 Bus	INSPD Fig. 16	ANG-15 115VAC #C No. 2 to the Power Switching Unit - 115VAC #C Ess. No. 1 Bus energized
148	AGL148 = ANG077 • GUS002 + GUS102	002 102 007	148	1	a) Ess. No. 1 Bus b) Momentary Switch must Contain Logic Lockup for > 10M Sec	INSPD Fig. 16 Zone 1B, 2C, 3B, 4B, 5B	Emerg Jett Store Push Button Switch Depressed and Left or Right MLO Weight is not on Wheels

TABLE III F-14 SOSTEL BOOLEAN EQUATIONS

1 Table Item #	2 Boolean Equation	3 Transducer List Cross Reference	4 Solid State Controller List Cross Reference	5 Bus/Load Management Priority	6 Special Considerations	7 Reference Drawings	8 Equation Description & Notes
149	AML149 = AMS078	078	149	1	a) Ess. No. 1 Bus b) Momentary With > 10MS Lockup	INSFD Fig. 16 Zone 1B, 2A, 5B	ACM Encounter Mode Select (28VDC) = ACM Switch On
150	AML150 = GUS002 + GUS002 • AMS078	002 149 078	150	1	a) Ess. No. 1 Bus b) Momentary With > 10MS Lockup	INSFD Fig. 16 Zone 1B, 3B, 4B, 5B	Emerg Jett Cmd No. 1 (28VDC) = Left or Right MUG Weight is not on wheels and Emerg Jett Stores Push Button Switch Depressed
151	AML151 = AMS077	077	151	1	a) Ess. No. 1 Bus b) Momentary With > 10M Sec Lockup	INSFD Fig. 16 Zone 4B	Emerg Stores Jett Push Button Switch Lamp On (28VDC) = Emerg Stores Jett Push Button Depressed
152	AGL152	N/A	152	1	Ess. No. 1 Bus	INSFD Fig. 16 Zone 1B, 5B	AWG-15 (28VDC) and Power Switching Unit (95A2) 28VDC = 28VDC Ess. No. 1 Bus energized
153	AGL153 = AMS080 • GUS052 • AMS082	052 080 082	153	1	Ess. No. 1 Bus	INSFD Fig. 16 Zone 2A, 3A, 4B, 5B	Safety Override (28VDC) to Armament Panel = Armament Safety Override Switch Enabled and MUG Handle-Down and ACM Panel Master Arm-On
154	AGL154 = GUS052 • AMS082	052 080	154	1	Ess. No. 1 Bus	INSFD Fig. 16 Zone 2A, 3C, 5B	MUG HDL DN (28VDC)/Master Arm Select to Armament Panel = MUG Handle-Down and ACM Panel Master Arm- On
155	AGL155 = GUS052 • AMS082	052 080	155	1	Ess. No. 1 Bus	INSFD Fig. 16 Zone 2A, 3C, 5B	MUG HDL UP (28VDC)/Master Arm Select to the Armament Panel = MUG Handle-Up and ACM Panel master Arm-On
156	AML156 = AMS081 • (GUS052 • AMS078) + (AMS080 • GUS052 • AMS082)	052 078 080 081 082	156	1	Ess. No. 1 Bus	INSFD Fig. 16 Zone 2A, 3C 4B, 5B	ACM Jettison Select (28VDC) to the Armaments Panel = ACM Jett Push Button Depressed and (MUG Handle- Up) or (ARMST Safety Override Switch-Enabled and MUG Handle-Down and Master Arm Switch-On)



TABLE III F-14 DIGITAL BOOLEAN EQUATIONS

1 Table Item #	2 Boolean Equation	3 Transducer List Cross Reference	4 Solid State Controller List Cross Reference	5 Bus/Load Management Priority	6 Special Considerations	7 Reference Drawings	8 Equation Description & Notes
157	$\overline{A01157} \cdot \overline{A01001} \cdot \overline{A01077} \cdot \overline{A01079}$	077 079 001	157	1	Ess. No. 1 Bus	IMSPD Fig. 16 Zone 5B, 2A, 4B	Pulse Enable (28VDC) to the Armament Panel = ACM Jett Push Button Not Depressed and <u>Empty</u> . Stores Jett Push Button Not Depressed and Pulse Enable INTLK

TABLE I. F-14 SCOTEL SIGNAL TRANSDUCERS

FIGURE 17 SHEET 1

1 Table Item #	2 Signal Name/Function	3 Identifier Code	4 Signal Source Box Identification	5 Point of Origin	6 Transducer Type	7 Present Signal Characteristics	8 Associated Loads	9 Conventional Switches Being Replaced or Deleted	10 Operational Address	11 Reference Drawings	12 Associated Boolean Equation	13 Conditioning Technique
251	Target Designate- rate-Up	AAS251	Target Designate Switch (85S1)	Pilots Left Side Console FS225	3 Position Slide Switch	Up = Switched 28VDC Up = Open	Armament Panel (85A1)	Target Designate Switch	OIP24	146FD Fig. 17 Zone 2A	328	Solid State
252	Target Designate- rate - DES	AAS252	Target Designate Switch (85S1)	Pilots Left Side Console FS225	3 Position Slide Switch	DES = Switched 28VDC DES = Open	Armament Panel (85A1)	Target Designate Switch	OIP25	146FD Fig. 17 Zone 2A	329	Solid State
253	Target Designate- rate - DN	AAS253	Target Designate Switch (85S1)	Pilots Left Side Console FS225	3 Position Slide Switch	DN = Switched 28VDC DN = Open	Armament Panel (85A1)	Target Designate Switch	OIP26	146FD Fig. 17 Zone 2A	330	Solid State

TABLE II. F-24 SOLID STATE POWER CONTROLLERS AND DRIVERS

1 Table Item #	2 Type of Power Controller	3 Rating V & I	4 Associated Loads	5 Duty Cycle	6 Load Power Dissipation	7 P.C. Location	8 Conventional Devices Being Replaced	9 Operational Address	10 Identifier Code	11 Reference Drawings	12 Associated Boolean Equations
322	AC - 1 Pole	V = 115VAC 6A I = 5A	Power Supply (30A1)	100%			CB33 (5A) AN/AM-4 115 VAC 6A (35A5)	01Q42	AAL322	INSFD Fig. 17 Zone 3A, 4A	322
323	AC - 1 Pole	V = 115VAC 6B I = 5A	Power Supply (30A1)	100%			CB44 (5A) AN/AM-4 115VAC 6B (35A5)	01Q43	AAL323	INSFD Fig. 17 Zone 3A, 4A	323
324	AC - 1 Pole	V = 115VAC 6C I = 5A	Power Supply (30A1)	100%			CB50 (5A) AN/AM-4 115VAC 6C (35A5)	01Q44	AAL324	INSFD Fig. 17 Zone 3A, 4A	324
325	Enable Signal	V = 28VDC	Armament Panel (B5A1) (MLG Door-Up and Locked Signal)				CB28 (5A) Master Arm (36A1)	02D36	AAL325	INSFD Fig. 17 Zone 6C, 3B, 1B	325
326	Enable Signal	V = 28VDC	Armament Panel (B5A1) (MLG WSL Wn Signal)				CB28 (5A) Master Arm (36A1) P/O K1 MLG Handle "E" (Right Glove Relay Box 772A1)	02D37	AAL326	INSFD Fig. 17 Zone 5C, 3C, 1B	326
327	Relay Driver	40ND/open	Power Supply (30A1) (INTLK RTN - Signal)				CB4 (5A) MLG Safety RLY No. 1 (36A1) P/O K31 MLG SAF D (Right Glove Relay Box 772A1)		AAL327	INSFD Fig. 17 Zone 4C, 3C, 2B, 1B	327
328	Enable Signal	V = 28VDC	Armament Panel (B5A1) (Target Designator Up- Signal)				CB36 (3A) ACM Panel PMR (36A1)	02D38	AAL328	INSFD Fig. 17 Zone 6B, 1A	328
329	Enable Signal	V = 28VDC	Armament Panel (B5A1) (Target Designator DES Signal)				CB36 (3A) ACM Panel PMR (36A1)	02D39	AAL329	INSFD Fig. 17 Zone 6B, 1A	329
330	Enable Signal	V = 28VDC	Armament Panel (B5A1) (Target Designator DN- Signal)				CB36 (3A) ACM Panel PMR (36A1)	02D40	AAL330	INSFD Fig. 17 Zone 6B, 1A	330

FIGURE 17 SHEET 2

TABLE II P-H SOLID STATE POWER CONTROLLERS AND DRIVERS

1 Table Item #	2 Type of Power Controller	3 Rating V & I	4 Associated Loads	5 Duty Cycle	6 Load Power Dissipation	7 P.C. Location	8 Conventional Devices Being Replaced	9 Operational Address	10 Identifier Code	11 Reference Drawings	12 Associated Boolean Equations
331	DC - 1 Pole	V = 28VDC	Armament Panel (85A1) (Target Des- ignator DM-Signal)	100%			CB12 (5A) AN/AMW 4 (3EA4)	02DA1	AAL331	13MFD Fig. 17 Zone 6A, 1C	331
397	DC - 1 Pole	V = 28 VDC I = 7.5A	Power Switching Unit (85A2) Mech Fusing STAL and 8	100%			CB9 (1.5A) Mech Fusing STAL and 8 (3EA4)	04Q01	AAL397	13MFD Fig. 17 Zone 1C, 17A	397

TABLE III F-14 SUSTEL BOOLEAN EQUATIONS

FIGURE 17 SHEET 1

1	2	3	4	5	6	7	8
Table Item #	Boolean Equation	Transducer List Cross Reference	Solid State Controller List Cross Reference	Bus/Load Management Priority	Special Considerations	Reference Drawings	Equation Description & Notes
322	AAL322	N/A	322	3	Left Main Bus	1MSFD Fig. 17 Zone 3A, 4A	Power Supply (30A1) - 115VAC #A - 115VAC #A Left Main Bus-energized
323	AAL323	N/A	323	3	Left Main Bus	1MSFD Fig. 17 Zone 3A, 4A	Power Supply (30A1) - 115VAC #B - 115VAC #B Left Main Bus-energized
324	AAL324	N/A	324	3	Left Main Bus	1MSFD Fig. 17 Zone 3A, 4A	Power Supply (30A1) - 115VAC #C - 115VAC #C Left Main Bus-energized
325	AAL325 = G18202	202	325	1	Eas. No. 1 Bus	1MSFD Fig. 17 Zone 6C, 3B, 1B	Armament Panel - MLG Door Up and Locked Signal - MLG Door-Up and Locked
326	AAL326 = G18092	092	326	1	Eas. No. 1 Bus	1MSFD Fig. 17 Zone 5C, 3C, 2B	Armament Panel - MLG HUL Down Signal - MLG Handle - Down
327	AAL327 = G18002	002	327	1	Eas. No. 1 Bus	1MSFD Fig. 17 Zone 4C, 3C, 2B, 3B	Power Supply (30A1) - INTLE RTN (OND) - Left MLG Weight on Wheels - Not
328	AAL328 = AAL251	251	328	1	Eas. No. 1 Bus	1MSFD Fig. 17 Zone 6A, 1A	Armament Panel - Target Designate Up Signal - Target Designate-Up
329	AAL329 = AAL252	252	329	1	Eas. No. 1 Bus	1MSFD Fig. 17 Zone 6B, 1A	Armament Panel - Target Designate DES Signal - Target Designate-DES
330	AAL330 = AAL253	253	330	1	Eas. No. 1 Bus	1MSFD Fig. 17 Zone 6B, 1A	Armament Panel - Target Designate IN Signal - Target Designate-IN
331	AAL331	N/A	331	3	Left Main Bus	1MSFD Fig. 17 Zone 6A, 1C	Armament Panel - (AMM-4-28VDC) - 28VDC Left Main Bus energized
337	AGL337	N/A	337	3	Left Main Bus	1MSFD Fig. 17 Zone 1C, 17A	Power Relocking Unit - (Mech Pushing STAL and 8) - 28VDC Left Main Bus energized



TABLE I F-14 SATEL SIGNAL TRANSDUCERS

1 Table Item #	2 Signal Name/Function	3 Identifier Code	4 Signal Source Box Identification	5 Point of Origin	6 Transducer Type	7 Present Signal Characteristics	8 Associated Loads	9 Conventional Switches Being Replaced or Deleted	10 Operational Address	11 Reference Drawings	12 Associated Boolean Equation	13 Conditioning Technique
254	Cage-Seam	AIS254	Throttle Quadrant (711A1) - Cage- Seam Switch	Pilots Left Side Console FS225	Push Button Switch	Cage-Seam = Switched 28VDC Cage-Seam not = Open	Armament Panel (5A1) (Gun Cage Command 28V)	Cage-Seam Switch	01P27	1WSFD Fig. 18 Zone 2C	333	Solid State
255	Weapon Selector- Gun	AIS255	Control Stick (20A4) Hand Grip (20A4A2)	Pilots Cockpit FS225	4 Position Switch	Gun = Switched 28VDC Off = Open	Armament Panel (5A1) (Gun Select 28VDC)	N/A	02P20	1WSFD Fig. 18 Zone 6C	336 337	Resistor Divider Adapter
256	Weapon Trigger- Depressed	AIS256	Control Stick (20A4) Hand Grip (20A4A2)	Pilots Cockpit FS225	Double Gauged Push Button	Depressed = Switched 28VDC Depressed Not = Open	Armament Panel (5A1)	N/A	02P21	1WSFD Fig. 18 Zone 6C	337	Resistor Divider Adapter

FIGURE 18 SHEET 1

TABLE II F-4 SOLID STATE POWER CONTROLLERS AND DRIVERS

1 Table Item #	2 Type of Power Controller	3 Rating V & I	4 Associated Loads	5 Duty Cycle	6 Load Power Dissipation	7 P.C. Location	8 Conventional Devices Being Replaced	9 Operational Address	10 Identifier Code	11 Reference Drawings	12 Associated Boolean Equations
332	AC - 1 Pole	$V = 115VAC$ $I = 5A$	Gun Controller (31A1) (115VAC @ Power)	100%			CB16 (3A) Gun Contr PWR AC (35A1)	01Q16	AUL332	INSFD Fig. 18 Zone 3C, 2A	332
333	Enable Driver	$V = 28VDC$	Armament Panel (95A1) (Gun Cage CMD 28VDC)				CB36 (3A) ACM PHL PWR (36A1)	02D42	AUL333	INSFD Fig. 18 Zone 9C, 2C, 1C	333
334	DC - 1 Pole	$V = 28VDC$ $I = 7.5A$	Power Switching Unit (95A2) (Gun Arm 28VDC)	100%			CB35 (7.5A) Gun Armed PWR (36A4)	06Q02	AUL334	INSFD Fig. 18 Zone 36C, 1B	334
335	DC - 1 Pole	$V = 28VDC$ $I = 15A$	a) Gun Controller (31A1) (Gun Clear/Gun Con- trol 28VDC) b) Purging Switch- ing Assembly (31A8) (Gun Con- trol 28VDC)	100%			CB41 (15A) Gun CLR/Gun Contr PWR DC (36A4)	01Q17	AUL335	INSFD Fig. 18 Zone 1C, 38B 40C, 41C	335
336	Enable Driver	$V = 28VDC$	Armament Panel (95A1) (Gun Select 28VDC)				CB31 (5A) AMG-15 DC (36A1)	02D43	AUL336	INSFD Fig. 18 Zone 1C, 8C, 9B	336
337	Enable Driver	$V = 28VDC$	Purging Switching Assembly (31A8) (Trigger Interrupt Enable 28VDC)				CB31 (5A) AMG-15 DC (36A1)	01Q18	AUL337	INSFD Fig. 18 Zone 1C, 8C, 40C, 42B	337

TABLE III F-14 SUSTEL BOOLEAN EQUATIONS

1 Table Item #	2 Boolean Equation	3 Transducer List Cross Reference	4 Solid State Controller List Cross Reference	5 Bus/Load Management Priority	6 Special Considerations	7 Reference Drawings	8 Equation Description & Notes
332	AUL332	N/A	332	3	R. Main Bus	INSFD Fig. 1B Zone 3C, 2A	Gun Controller (31A1) 115VAC #B FMR = 115VAC #B Bus energized
333	AUL333 = AUS254	254	333	1	Esa. No. 1 Bus	INSFD Fig. 1B Zone 5C, 2C, 1C	Armament Panel - Gun Cage CMD 28VDC + Cage-Scam
334	AUL334	N/A	334	3	R. Main Bus	INSFD Fig. 1B Zone 39C, 1B	Power Switching Unit (B5A2) - Gun Arm 28VDC + 28VDC Right Main Bus energized
335	AUL335	N/A	335	3	R. Main Bus	INSFD Fig. 1B Zone 1C, 38B, 40C, 41C	Gun Controller (31A1) and Purging Switching Assembly (31A8) - Gun Clear/Gun Control 28VDC = 28VDC Right Main Bus energized
336	AUL336 = AUS225	255	336	1	Esa. No. 1 Bus	INSFD Fig. 1B Zone 1C, 8C, 9B	Armament Panel (B5A1) - Gun Select 28VDC = Weapon Selector - Gun
337	AUL337 = AUS255 • AUS256	255 256	337	1	Esa. No. 1 Bus	INSFD Fig. 1B Zone 1C, 8C, 40C, 42B	Purging Switching Assembly (31A8) - Trigger Interrupt 28VDC = Weapon Selector - Gun and Weapon Trigger - Depressed

FIGURE 19 SHEET 1

TABLE I. F-14 SUSTAIN SIGNAL TRANSDUCERS

1 Table Item #	2 Signal Name/Function	3 Identifier Code	4 Signal Source Box Identification	5 Point of Origin	6 Transducer Type	7 Present Signal Characteristics	8 Associated Loads	9 Conventional Switches Being Replaced or Deleted	10 Operational Address	11 Reference Drawings	12 Associated Boolean Equation	13 Conditioning Technique
257	STATION 1A SLIDEMINDER - PWR INTLK (28 VIC RTN)	AGS 257	STATION 1A OUTBOARD SLIDEMINDER	LEFT WING FS 560 BL 120	SLIDEMINDER GND	GND = SLIDEMINDER 1A ON BOARD OPEN = NOT ON BOARD	K40 - STA 1A PWR GND INTERLOCK (LEFT GLOVE RELAY BOX 773A1)	N/A	04P07	INSFD FIG. 19 ZONE 19A, 57A	340 341	RESISTOR DIVIDER ADAPTER
258	STATION 1B SLIDEMINDER - PWR INTLK (28 VIC RTN)	AGS 258	STATION 1B INBOARD SLIDEMINDER	LEFT WING FS 560 BL 120	SLIDEMINDER LB GND	GND = SLIDEMINDER 1B ON BOARD OPEN = NOT ON BOARD	K41 - STA 1B PWR GND INTERLOCK (LEFT GLOVE RELAY BOX 773A1)	N/A	04P08	INSFD FIG. 19 ZONE 19A, 57A	342 343	RESISTOR DIVIDER ADAPTER
259	STATION 8A SLIDEMINDER - PWR INTLK (28 VIC RTN)	AGS 259	STATION 8A OUTBOARD SLIDEMINDER	RIGHT WING FS 560 BL 120	SLIDEMINDER 8A GND	GND = SLIDEMINDER 8A ON BOARD OPEN = NOT ON BOARD	K40 - STA 8A PWR GND INTERLOCK (RIGHT GLOVE RELAY BOX 773A1)	N/A	07P21	INSFD FIG. 19 ZONE 20A, 57A	344 345	RESISTOR DIVIDER ADAPTER
260	STATION 8B SLIDEMINDER - PWR INTLK (28 VIC RTN)	AGS 260	STATION 8B INBOARD SLIDEMINDER	RIGHT WING FS 560 BL 120	SLIDEMINDER 8B GND	GND = SLIDEMINDER 8B ON BOARD OPEN = NOT ON BOARD	K41 - STA 8B PWR GND INTERLOCK (RIGHT GLOVE RELAY BOX 773A1)	N/A	07P22	INSFD FIG. 19 ZONE 20A, 57A	346 347	RESISTOR DIVIDER ADAPTER
279	MEANON SELECTOR SW	YAS 279	CONTROL STICK (20A4) HAND GRIP (20A-YAS)	PILOT'S CENTER CONSOLE FS 225	1P 4 POSITION SWITCH	SW = 28 VIC OFF = OPEN	ARGUMENT PANEL (85A1)	N/A	02P22	INSFD FIG. 19 ZONE 8B	379	RESISTOR DIVIDER ADAPTER
280	REL STEPPING SW-DEPRESSED	YAS 280	CONTROL STICK (20A4) HAND GRIP (20A-YAS)	PILOT'S CENTER CONSOLE FS 225	PUSHBUTTON	DEPRESSED = SWITCHED 28 VIC OPEN	ARGUMENT PANEL (85A1) (AIM-9 STATION SELECT 28 VIC)	N/A	02P23	INSFD FIG. 19 ZONE 8A	380	RESISTOR DIVIDER ADAPTER

TABLE II 2-10 SOLID STATE POWER CONTROLLERS AND DRIVERS

1 Table Item #	2 Type of Power Controller	3 Rating V & I	4 Associated Loads	5 Duty Cycle	6 Load Power Dissipation	7 P.C. Location	8 Conventional Devices Being Replaced	9 Operational Address	10 Identifier Code	11 Reference Drawings	12 Associated Boolean Equations
338	DC-1 POLE	V = 28 VDC I = 5A	POWER SWITCHING UNIT (85A2)	100%			CB24 (5A) STA 1A COOL FMR (36A4)	06Q03	AGL 338	INSPD FIG. 19 ZONE 3C, 19C	338
339	DC-1 POLE	V = 28 VDC I = 5A	POWER SWITCHING UNIT (85A2)	100%			CB21 (5A) STA 8A COOL FMR (36A4)	06Q04	AGL 339	INSPD FIG. 19 ZONE 3C, 19C	339
340	DC-1 POLE	V = 28 VDC I = 10A	SIDEWINDER LAUNCHER (STATION 1A OUTBOARD)				CB26 (10A) STA 1A ADM-9 FMR (36A4) P/O RMO - STA 1A (LEFT GLOVE RELAY BOX 773A1)	08Q01	AGL 340	INSPD FIG. 19 ZONE 3C, 19A 38B, 57A	340
341	AC-1 POLE	V = 115 VAC I = 3A	SIDEWINDER LAUNCHER (STATION 1A OUTBOARD)				CB14 (3A) STA 1A ADM-9 FMR PH B (35A1) P/O RMO - STA 1A (LEFT GLOVE RELAY BOX 773A1)	08Q02	AGL 341	INSPD FIG. 19 ZONE 4A, 19A 38A, 57A	341
342	DC-1 POLE	V = 28 VDC I = 10A	SIDEWINDER LAUNCHER (STATION 1B INBOARD)				CB25 (10A) STA 1B ADM-9 FMR (36A4) P/O RMO - STA 1B (LEFT GLOVE RELAY BOX 773A1)	08Q03	AGL 342	INSPD FIG. 19 ZONE 3C, 19A 43B, 57A	342
343	AC-1 POLE	V = 115 VAC I = 3A	SIDEWINDER LAUNCHER (STATION 1B INBOARD)				CB12 (3A) STA 1B ADM-9 FMR PH B (35A1) P/O RMO - STA 1B (LEFT GLOVE RELAY BOX 773A1)	08Q04	AGL 343	INSPD FIG. 19 ZONE 3C, 20A 50B, 57A	343
344	DC-1 POLE	V = 28 VDC I = 10A	SIDEWINDER LAUNCHER (STATION 8A OUTBOARD)				CB23 (10A) STA 8A ADM-9 FMR (36A4) P/O RMO - STA 8A (RIGHT GLOVE RELAY BOX 772A1)	08Q05	AGL 344	INSPD FIG. 19 ZONE 3C, 20A 50B, 57A	344
345	AC-1 POLE	V = 115 VAC I = 3A	SIDEWINDER LAUNCHER (STATION 8A OUTBOARD)				CB4 (3A) STA 8A ADM-9 FMR PH B (35A1) P/O RMO - STA 8A (RIGHT GLOVE RELAY BOX 772A1)	08Q06	AGL 345	INSPD FIG. 19 ZONE 1B, 20A 50A, 57A	345



FIGURE 12 SHEET 2

TABLE II P-1A SOLID STATE POWER CONTROLLERS AND DRIVERS

1 Table Item #	2 Type of Power Controller	3 Rating V & I	4 Associated Loads	5 Duty Cycle	6 Load Power Description	7 P.C. Location	8 Conventional Devices Being Replaced	9 Operational Address	10 Identifier Code	11 Reference Drawings	12 Associated Boolean Equations
346	DC-1 POLE	V= 28 VDC I= 10A	SIDEMINDER LAUNCHER (STATION BB INBOARD)				CR2 (10A) STA BB AIM-9 FMR (36A1) P/O R41 - STA BB (RIGHT GLOVE RELAY BOX 772A-1)	08Q07	AEL 346	EMEPD FIG. 19 ZONE 3C, 20A 55B, 52A	346
347	AC-1 POLE	V= 115 VAC P.C. I= 3A	SIDEMINDER LAUNCHER (STATION BB INBOARD)				CR2 (3A) STA BB AIM-9 FMR PH C (35A1) P/O R41 - STA BB (RIGHT GLOVE RELAY BOX 772A1)	08Q08	AEL 347	EMEPD FIG. 19 ZONE 4B, 20A 55A, 57A	347
379	ENABLE DRIVER	V= 28 VDC	ARMAMENT PANEL (35A1) (AIM-9 SELECT 28 VDC)				CB31 (5A) AM9-15 DC (36A1)	02D04	VAL 379	EMEPD FIG. 19 ZONE 1C, 8B 9A	379
380	ENABLE DRIVER	V= 28 VDC	ARMAMENT PANEL (35A1) (AIM-9 STATION SELECT 28 VDC)				CB31 (5A) AM9-15 DC (36A1)	02D05	VAL 380	EMEPD FIG. 19 ZONE 1C, 8A 9B	380

TABLE III F-14 SUSTEL BOOLEAN EQUATIONS

1 Table Item #	2 Boolean Equation	3 Transducer List Cross Reference	4 Solid State Controller List Cross Reference	5 Bus/Load Management Priority	6 Special Considerations	7 Reference Drawings	8 Equation Description & Notes
338	AGL 338	N/A	338	3	R. MAIN BUS	INSPD FIG. 16 ZONE 3C, 19C	POWER SWITCHING UNIT (85A2) - STATION 1 COOL PWR (28 VDC) = 28 VDC RIGHT MAIN BUS ENERGIZED
339	AGL 339	N/A	339	3	R. MAIN BUS	INSPD FIG. 16 ZONE 3C, 19C	POWER SWITCHING UNIT (85A2) - STATION 8 COOL PWR (28 VDC) = 28 VDC RIGHT MAIN BUS ENERGIZED
340	AGL 340 = AGS 257	257	340	3	R. MAIN BUS	INSPD FIG. 19 ZONE 3C, 19A 38A, 57A	SIDEMINDER LAUNCHER (STATION 1A OUTBOARD) - STA-1A 28 VDC PWR = STATION 1A SIDEMINDER - PWR INTLK (28 VDC KTN) (SIDEMINDER 1A ONBOARD)
341	AGL 341 = AGS 257	257	341	1	ESS. NO. 1 BUS	INSPD FIG. 19 ZONE 4A, 19A 38A, 57A	SIDEMINDER LAUNCHER (STATION 1A OUTBOARD) - STA-1A 115 VAC 8B = STATION 1A SIDEMINDER - PWR INTLK (28 VDC KTN) (SIDEMINDER 1A ONBOARD)
342	AGL 342 = AGS 258	258	342	3	R. MAIN BUS	INSPD FIG. 19 ZONE 3C, 19A 43B, 57A	SIDEMINDER LAUNCHER (STATION 1B INBOARD) - STA-1B 28 VDC PWR = STATION 1B SIDEMINDER - PWR INTLK (28 VDC KTN) (SIDEMINDER 1B ONBOARD)
343	AGL 343 = AGS 258	258	343	3	R. MAIN BUS	INSPD FIG. 19 ZONE 4B, 19A 43B, 57A	SIDEMINDER LAUNCHER (STATION 1B INBOARD) - STA-1B 115 VAC 4C = STATION 1B SIDEMINDER - PWR INTLK (28 VDC KTN) (SIDEMINDER 1B ONBOARD)
344	AGL 344 = AGS 259	259	344	3	R. MAIN BUS	INSPD FIG. 19 ZONE 3C, 20A 50B, 57A	SIDEMINDER LAUNCHER (STATION 8A OUTBOARD) - STA-8A 28 VDC PWR = STATION 8A SIDEMINDER PWR INTLK (28 VDC KTN) (SIDEMINDER 8A ONBOARD)
345	AGL 345 = AGS 259	259	345	3	R. MAIN BUS	INSPD FIG. 19 ZONE 4B, 20A 50A, 57A	SIDEMINDER LAUNCHER (STATION 8A OUTBOARD) - STA-8A 115 VAC 4B = STATION 8A SIDEMINDER-PWR INTLK (28 VDC KTN) (SIDEMINDER 8A ONBOARD)
346	AGL 346 = AGS 260	260	346	3	R. MAIN BUS	INSPD FIG. 19 ZONE 3C, 20A 55B, 57A	SIDEMINDER LAUNCHER (STATION 8B INBOARD) - STA-8B 28 VDC PWR = STATION 8B SIDEMINDER - PWR INTLK (28 VDC KTN) (SIDEMINDER 8B ONBOARD)
347	AGL 347 = AGS 260	260	347	3	R. MAIN BUS	INSPD FIG. 19 ZONE 4B, 20A 55A, 57A	SIDEMINDER LAUNCHER (STATION 8B INBOARD) - STA-8B 115 VAC 4C = STATION 8B SIDEMINDER - PWR INTLK (28 VDC KTN) (SIDEMINDER 8B ONBOARD)
379	VAL 379 = YAS 279	279	379	1	ESS. NO. 1 BUS	INSPD FIG. 19 ZONE 1C, 8B, 9A	ARMAMENT PANEL - AIM-9 SELECT 28 VDC = WEAPON SELECTOR - SW
380	VAL 380 = YAS 280	280	380	1	ESS. NO. 1 BUS	INSPD FIG. 19 ZONE 1C, 8A, 9B	ARMAMENT PANEL - AIM-9 STATION SELECT 28 VDC = MEL STEPPING SW - DEPRESSED

TABLE I. F-14 SUSTAIN SIGNAL TRANSDUCERS

FIGURE 20 SHEET 1

1 Table Item #	2 Signal Name/Function	3 Identifier Code	4 Signal Source Box Identification	5 Point of Origin	6 Transducer Type	7 Present Signal Characteristics	8 Associated Loads	9 Conventional Switches Being Replaced or Deleted	10 Operational Address	11 Reference Drawings	12 Associated Boolean Equation	13 Conditioning Technique
261	STA 4 ADM-7 PWR - ENABLE	AGS 261	LOGIC TIMING CONTROL C-903A1/ ANG-9 (27A2A43) (720)	FS 460	RELAY DRIVER SIGNAL		K4-STA 4 ADM-7 PWR (RIGHT GLOVE RELAY BOX 772A1)	N/A	07D12	INSFD FIG. 20 ZONE 6A, 5A	348 349 350	EXTERNAL SIGNAL ADAPTER
262	STA 5F ADM-7 PWR - ENABLE	AGS 262	LOGIC TIMING CONTROL C-903A1/ ANG-9 (27A2A43) (720)	FS 460	RELAY DRIVER SIGNAL		K4-STA 5 ADM-7 PWR (RIGHT GLOVE RELAY BOX 772A1)	N/A	07D13	INSFD FIG. 20 ZONE 6A, 5A	351 352 353	EXTERNAL SIGNAL ADAPTER
263	STA 3P ADM-7 PWR - ENABLE	AGS 263	LOGIC TIMING CONTROL C-903A1/ ANG-9 (27A2A43) (720)	FS 460	RELAY DRIVER SIGNAL		K4-STA 3 ADM-7 PWR (RIGHT GLOVE RELAY BOX 772A1)	N/A	07D14	INSFD FIG. 20 ZONE 6A, 5B	354 355 356	EXTERNAL SIGNAL ADAPTER
264	STA 6F ADM-7 PWR - ENABLE	AGS 264	LOGIC TIMING CONTROL C-903A1/ ANG-9 (27A2A43) (720)	FS 460	RELAY DRIVER SIGNAL		K4-STA 6 ADM-7 PWR (RIGHT GLOVE RELAY BOX 772A1)	N/A	07D15	INSFD FIG. 20 ZONE 6A, 5B	357 358 359	EXTERNAL SIGNAL ADAPTER
265	STA 1B ADM-7 PWR - ENABLE	AGS 265	LOGIC TIMING CONTROL C-903A1/ ANG-9 (27A2A43) (720)	FS 460	RELAY DRIVER SIGNAL		K4-STA 1 ADM-7 PWR (RIGHT GLOVE RELAY BOX 772A1)	N/A	07D16	INSFD FIG. 20 ZONE 6A, 5C	360 361 362	EXTERNAL SIGNAL ADAPTER
266	STA 8B ADM-7 PWR - ENABLE	AGS 266	LOGIC TIMING CONTROL C-903A1/ ANG-9 (27A2A43) (720)	FS 460	RELAY DRIVER SIGNAL		K4-STA 8 ADM-7 PWR (RIGHT GLOVE RELAY BOX 772A1)	N/A	07D17	INSFD FIG. 20 ZONE 6A, 5C	363 364 365	EXTERNAL SIGNAL ADAPTER
267	NSL AUX PWR ENABLE	AGS 267	LOGIC TIMING CONTROL C-903A1/ANG-9 (27A2A43) (720)	FS 460	RELAY DRIVER SIGNAL		K4-NSL AUX (RIGHT GLOVE RELAY BOX 772A1)	N/A	07D18	INSFD FIG. 20 ZONE 6A, 6C	366 367 368	EXTERNAL SIGNAL ADAPTER
268	ADM 5A HTR PWR - ON	AGS 268	WEARON CONTROL SYSTEM AM/ANG-9 AND ADM 5A LIQUID COOLING SYSTEM	FS 460	RELAY DRIVER SIGNAL		K51 - ADM 5A HTR PWR (LEFT GLOVE RELAY BOX 773A1)	N/A	05D10	INSFD FIG. 20 ZONE 7A	369 370 371 372 373 374	EXTERNAL SIGNAL ADAPTER

FIGURE 20 SHEET 2

TABLE I. F-14 BUSTEL SIGNAL TRANSDUCERS

1 Table Item #	2 Signal Name/Function	3 Identifier Code	4 Signal Source Box Identification	5 Point of Origin	6 Transducer Type	7 Present Signal Characteristics	8 Associated Loads	9 Conventional Switches Being Replaced or Deleted	10 Operational Address	11 Reference Drawings	12 Associated Boolean Equation	13 Conditioning Technique
269	STA 1B AIM-7 BATTERY-ARM AND HYDR-ENABLE	AGS 269	LOGIC TIMING CONTROL C-903A1/ANG-9 (27A2MA3) (720)	FS 460	RELAY DRIVER SIGNAL		K45-STA 1 AIM-7 BTRY (LEFT GLOVE RELAY BOX 773A1)	N/A	05D11	INSPD FIG. 20 ZONE 60C	383 389	EXTERNAL SIGNAL ADAPTER
270	STA 3F AIM-7 BATTERY-ARM AND HYDR-ENABLE	AGS 270	LOGIC TIMING CONTROL C-903A1/ANG-9 (27A2MA3) (720)	FS 460	RELAY DRIVER SIGNAL		K46-STA 3 AIM-7 BTRY (LEFT GLOVE RELAY BOX 773A1)	N/A	05D12	INSPD FIG. 20 ZONE 60C	384 391	EXTERNAL SIGNAL ADAPTER
271	STA 4F AIM-7 BATTERY-ARM AND HYDR-ENABLE	AGS 271	LOGIC TIMING CONTROL C-903A1/ANG-9 (27A2MA3) (720)	FS 460	RELAY DRIVER SIGNAL		K47-STA 4 AIM-7 BTRY (LEFT GLOVE RELAY BOX 773A1)	N/A	05D13	INSPD FIG. 20 ZONE 60C	385 394	EXTERNAL SIGNAL ADAPTER
272	STA 5F AIM-7 BATTERY-ARM AND HYDR-ENABLE	AGS 272	LOGIC TIMING CONTROL C-903A1/ANG-9 (27A2MA3) (720)	FS 460	RELAY DRIVER SIGNAL		K48-STA 5 AIM-7 BTRY (LEFT GLOVE RELAY BOX 773A1)	N/A	05D14	INSPD FIG. 20 ZONE 60C	386 393	EXTERNAL SIGNAL ADAPTER
273	STA 6F AIM-7 BATTERY-ARM AND HYDR-ENABLE	AGS 273	LOGIC TIMING CONTROL C-903A1/ANG-9 (27A2MA3) (720)	FS 460	RELAY DRIVER SIGNAL		K49-STA 6 AIM-7 BTRY (LEFT GLOVE RELAY BOX 773A1)	N/A	05D15	INSPD FIG. 20 ZONE 60C	387	EXTERNAL SIGNAL ADAPTER
274	STA 8B AIM-7 BATTERY-ARM AND HYDR-ENABLE	AGS 274	LOGIC TIMING CONTROL C-903A1/ANG-9 (27A2MA3) (720)	FS 460	RELAY DRIVER SIGNAL		K50-STA 8 AIM-7 BTRY (LEFT GLOVE RELAY BOX 773A1)	N/A	05D16	INSPD FIG. 20 ZONE 60C	388 390 392	EXTERNAL SIGNAL ADAPTER
275	AIM-7 MOTOR FIRE-SEL	AGS 275	ARMAMENT PANEL (85A1)	NFO LEFT VERTICAL CONSOLE FS 300	ENABLE SIGNAL		POWER SWITCHING UNIT (85A2)	N/A	05D17	INSPD FIG. 20 ZONE 20C	390 393 391 394 396	EXTERNAL SIGNAL ADAPTER
281	WEAPON SELECTOR SM-PH-SP	YAS 281	CONTROL STICK (20A4) HAND GRIP (20A4A2)	PILOT'S CENTER CONSOLE FS 225	1 POLE 4 POSITION SWITCH	PH SP-SWITCHED 28 VDC	ARMAMENT PANEL (85A1)	N/A	02H24	INSPD FIG. 20 ZONE 2C	381	RESISTOR DIVIDER ADAPTER



TABLE II. P-14 SOLID STATE POWER CONTROLLERS AND DRIVERS

1 Table Item #	2 Type of Power Controller	3 Rating V & I	4 Associated Loads	5 Duty Cycle	6 Load Power Dissipation	7 P.C. Location	8 Conventional Devices Being Replaced	9 Operational Address	10 Identifier Code	11 Reference Drawings	12 Associated Boolean Equations
348	AC-1 POLE	V= 115 VAC φA	STA 4F AIM-7 PWR (115 VAC PH A) MSL UMB (STA 4F) 273 P100 (B) - J				CB47 (15A) STA 4/5 AIM-7 PH A (35A5) P/O K45 STA 4 AIM-7 PWR (RIGHT GLOVE RELAY BOX 772A1)	08Q09	AGL 348	INSFD FIG. 20 ZONE 1A, 5A 64A, 27B	348
349	AC-1 POLE	V= 115 VAC φB	STA 4F AIM-7 PWR (115 VAC PH A) MSL UMB (STA 4F) 273 P100 (B) - W				CB45 (15A) STA 4/5 AIM-7 PH B (35A5) P/O K45 STA 4 AIM-7 PWR (RIGHT GLOVE RELAY BOX 772A1)	08Q10	AGL 349	INSFD FIG. 20 ZONE 2A, 5A 64A, 27B	349
350	AC-1 POLE	V= 115 VAC φC	STA 4F AIM-7 PWR (115 VAC PH A) MSL UMB (STA 4F) 273 P100 (B) - X				CB41 (15A) STA 4/5 AIM-7 PH C (35A5) P/O K45 STA 4 AIM-7 PWR (RIGHT GLOVE RELAY BOX 772A1)	08Q11	AGL 350	INSFD FIG. 20 ZONE 3A, 5A 64A, 27B	350
351	AC-1 POLE	V= 115 VAC φA	STA 5F AIM-7 PWR (115 VAC PH A) MSL UMB (STA 5F) 273 P100 (C)-J				CB47 (15A) STA 4/5 AIM-7 PH A (35A5) P/O K46 STA 5 AIM-7 PWR (RIGHT GLOVE RELAY BOX 772A1)	08Q12	AGL 351	INSFD FIG. 20 ZONE 1A, 5A 64A, 28B	351
352	AC-1 POLE	V= 115 VAC φB	STA 5F AIM-7 PWR (115 VAC PH A) MSL UMB (STA 5F) 273 P100 (C)-W				CB45 (15A) STA 4/5 AIM-7 PH B (35A5) P/O K46 - STA 5 AIM-7 PWR (RIGHT GLOVE RELAY BOX 772A1)	08Q13	AGL 352	INSFD FIG. 20 ZONE 2A, 5A 64A, 27B	352
353	AC-1 POLE	V= 115 VAC φC	STA 5F AIM-7 PWR (115 VAC PH A) MSL UMB (STA 5F) 273 P100 (C)-X				CB41 (15A) STA 4/5 AIM-7 PH C (35A5) P/O K46 - STA 5 AIM-7 PWR (RIGHT GLOVE RELAY BOX 772A1)	08Q14	AGL 353	INSFD FIG. 20 ZONE 3A, 5A 64A, 27B	353
354	AC-1 POLE	V= 115 VAC φA	STA 3F AIM-7 PWR (115 VAC PH A) MSL UMB (STA 3F) 273 P100 (A)-J				CB40 (15A) STA 3/6 AIM-7 PH A (35A5) P/O K44 - STA 3 AIM-7 PWR (RIGHT GLOVE RELAY BOX 772A1)	08Q15	AGL 354	INSFD FIG. 20 ZONE 1A, 5B 29B, 64A	354



FIGURE 20 SHEET 2

TABLE II P-14 SOLID STATE POWER CONTROLLERS AND DRIVERS

1 Table Item #	2 Type of Power Controller	3 Rating V & I	4 Associated Loads	5 Duty Cycle	6 Load Power Dissipation	7 P.C. Location	8 Conventional Devices Being Replaced	9 Operational Address	10 Identifier Code	11 Reference Drawings	12 Associated Boolean Equations
355	AC-1 POLE	V = 115 VAC IB	STA 3F AIM-7 PWR MSL UMB (STA 3F) 273 FLOO (A)-W				CB35 (15A) STA 3/6 AIM-7/AIM-5A PWR PA B (35A5) P/O K44 - STA 3 AIM-7 PWR (RIGHT GLOVE RELAY BOX 772A1)	08Q16	ACL 355	INSFD FIG. 20 ZONE 1A, 5B, 25B, 64A	355
356	AC-1 POLE	V = 115 VAC IC	STA 3F AIM-7 PWR MSL UMB (STA 3F) 273 FLOO (A)-X				CB35 (15A) STA 3/6 AIM-7/AIM-5A PWR PH C (35A5) P/O K44 - STA 3 AIM-7 PWR (RIGHT GLOVE RELAY BOX 772A1)	08Q17	ACL 356	INSFD FIG. 20 ZONE 3A, 5B, 25B, 64A	356
357	AC-1 POLE	V = 115 VAC IA	STA 6F AIM-7 PWR MSL UMB (STA 6F) 273 FLOO (D)-J				CB40 (15A) STA 3/6 AIM-7/AIM-5A PWR PH A (35A5) P/O K47 - STA 6 AIM-7 PWR (RIGHT GLOVE RELAY BOX 772A1)	08Q18	ACL 357	INSFD FIG. 20 ZONE 1A, 5B, 26B, 64B	357
358	AC-1 POLE	V = 115 VAC IB	STA 6F AIM-7 PWR MSL UMB (STA 6F) 273 FLOO (D)-W				CB38 (15A) STA 3/6 AIM-7/AIM-5A PWR PH B (35A5) P/O K47 - STA 6 AIM-7 PWR (RIGHT GLOVE RELAY BOX 772A1)	08Q19	ACL 358	INSFD FIG. 20 ZONE 2A, 5B, 26B, 64B	358
359	AC-1 POLE	V = 115 VAC IC	STA 6F AIM-7 PWR MSL UMB (STA 6F) 273 FLOO (D)-X				CB35 (15A) STA 3/6 AIM-7/AIM-5A PWR PH C (35A5) P/O K47 - STA 6 AIM-7 PWR (RIGHT GLOVE RELAY BOX 772A1)	08Q20	ACL 359	INSFD FIG. 20 ZONE 3A, 5B, 26B, 64B	359
360	AC-1 POLE	V = 115 VAC IA	STA 1B AIM-7 PWR MSL UMB (STA 1B) 782A3F12-J				CB34 (15A) STA 1/8 AIM-7 PH A (35A5) P/O K43 - STA 1 AIM-7 PWR (RIGHT GLOVE RELAY BOX 772A1)	08Q21	ACL 360	INSFD FIG. 20 ZONE 1A, 5B 29, 64A	360

TABLE JI P-14 SOLID STATE POWER CONTROLLERS AND DRIVERS

1 Table Item #	2 Type of Power Controller	3 Rating V & I	4 Associated Loads	5 Duty Cycle	6 Load Power Dissipation	7 P.C. Location	8 Conventional Devices Being Replaced	9 Operational Address	10 Identifier Code	11 Reference Drawings	12 Associated Boolean Equations
361	AC-1 POLE	V- 115 VAC 48	STA 1B AIM-7 PWR MSL DMB (STA 1B) 782A3F12-W				CB34 (15A) STA 1/8 AIM-7 FH B (35A5) P/O K43 - STA 1 AIM-7 PWR (RIGHT GLOVE RELAY BOX 772A1)	08Q22	AGL 361	INSFD FIG. 20 ZONE 1B, 5B, 29B, 64A	361
362	AC-1 POLE	V- 115 VAC 48	STA 1E AIM-7 PWR MSL DMB (STA 1B) 782A3F12-X				CB29 (15A) STA 1/8 AIM-7 FH C (35A5) P/O K43-STA 1 AIM-7 PWR (RIGHT GLOVE RELAY BOX 772A1)	08Q23	AGL 362	INSFD FIG. 20 ZONE 1C, 5C, 29B, 64A	362
363	AC-1 POLE	V- 115 VAC 48	STA 8B AIM-7 PWR MSL DMB (STA 8B) 282A3F12-J				CB34 (15A) STA 1/8 AIM-7 FH A (35A5) P/O K48 - STA 8 AIM-7 PWR (RIGHT GLOVE RELAY BOX 772A1)	08Q24	AGL 363	INSFD FIG. 20 ZONE 1A, 5C, 32B, 64B	363
364	AC-1 POLE	V- 115 VAC 48	STA 8B AIM-7 PWR MSL DMB (STA 8B) 782A3F12-W				CB32 (15A) STA 1/8 AIM-7 FH B (35A5) P/O K48-STA 8 AIM-7 PWR (RIGHT GLOVE RELAY BOX 772A1)	08Q25	AGL 364	INSFD FIG. 20 ZONE 1B, 5C, 32B, 64B	364
365	AC-1 POLE	V- 115 VAC 48	STA 8B AIM-7 PWR MSL DMB (STA 8B) 782A3F12-X				CB29 (15A) STA 1/8 AIM-7 FH C (35A5) P/O K48 - STA 8 AIM-7 PWR (RIGHT GLOVE RELAY BOX 772A1)	08Q26	AGL 365	INSFD FIG. 20 ZONE 1C, 5C, 32B, 64B	365
366	AC-1 POLE	V-115 VAC 48 I- 10A	POWER SUPPLY PP-6675/AMT-9 (27A24A1) (730)				CB25 (10A) MSL AUX PH A (35A5) P/O K49 - MSL AUX (RIGHT GLOVE RELAY BOX 772A1)	08Q27	AGL 366	INSFD FIG. 20 ZONE 1A, 6C, 34A, 60A	366
367	AC-1 POLE	V-115 VAC 48 I- 10A	POWER SUPPLY PP-6675/AMT-9 (27A24A1) (730)				CB22 (10A) MSL AUX PH B (35A5) P/O K49 - MSL AUX (RIGHT GLOVE RELAY BOX 772A1)	08Q28	AGL 367	INSFD FIG. 20 ZONE 1B, 6C 34A, 60A	366

TABLE II Full Solid State Power Controllers and Drivers

1 Table Item #	2 Type of Power Controller	3 Rating V & I	4 Associated Loads	5 Duty Cycle	6 Load Power Dissipation	7 P.C. Location	8 Conventional Devices Being Replaced	9 Operational Address	10 Identifier Code	11 Reference Drawings	12 Associated Boolean Equations
368	AC-1 POLE	V= 115 VAC ΦC I= 10A	POWER SUPPLY PP-6675/AMG-9 (27A24A1) (730)				CR20 (10A) MSL AUX PH C (35A5) P/O K49 - MSL AUX (RIGHT GLOVE RELAY BOX 773A1)	08Q29	AGL 368	INSFD FIG. 20 ZONE 1C, 6C 34A, 60A	367
369	AC-1 POLE	V= 115 VAC ΦC	STA 5A ADM-54 MSL HTR FMR MSL UMB J1-108				CB42 (15A) MSL HTR PH C (35A5) P/O K51 - ADM-54 HTR FMR (LEFT GLOVE RELAY BOX 773A1)	08Q30	AGL 369	INSFD FIG. 20 ZONE 1C, 7A 101A, 105A	369
370	AC-1 POLE	V= 115 VAC ΦC	STA 6A ADM-54 MSL HTR FMR MSL UMB J1-108				CB42 (15A) MSL HTR PH C (35A5) P/O K51 ADM-54 HTR FMR (LEFT GLOVE RELAY BOX 773A1)	08Q31	AGL 370	INSFD FIG. 20 ZONE 1C, 7A 101A	370
371	AC-1 POLE	V= 115 VAC ΦB	STA 3R ADM-54 MSL HTR FMR MSL UMB J1-108				CB43 (15A) MSL HTR PH B (35A5) P/O K51 - ADM-54 HTR FMR (LEFT GLOVE RELAY BOX 773A1)	08Q32	AGL 371	INSFD FIG. 20 ZONE 1B, 7A 93B	371
372	AC-1 POLE	V= 115 VAC ΦB	STA 4R ADM-54 MSL HTR FMR MSL UMB J1-108				CB43 (15A) MSL HTR PH B (35A5) P/O K51 - ADM-54 HTR FMR (LEFT GLOVE RELAY BOX 773A1)	08Q33	AGL 372	INSFD FIG. 20 ZONE 1B, 7A 95A, 97A	372
373	AC-1 POLE	V= 115 VAC ΦA	STA 1B ADM-54 MSL HTR FMR MSL UMB J1-108				CB46 (15A) MSL HTR PH A (35A5) P/O K51 - ADM-54 HTR FMR (LEFT GLOVE RELAY BOX 773A1)	08Q34	AGL 373	INSFD FIG. 20 ZONE 1A, 7A 89C	373
374	AC-1 POLE	V= 115 VAC ΦA	STA 8B ADM-54 MSL HTR FMR MSL UMB J1-108				CB46 (15A) MSL HTR PH A (35A5) P/O K51-ADM-54 HTR FMR (LEFT GLOVE RELAY BOX 773A1)	08Q35	AGL 374	INSFD FIG. 20 ZONE 1A, 7A 91C	374

TABLE II. E-14 SOLID STATE POWER CONTROLLERS AND DRIVERS

1 Table Item #	2 Type of Power Controller	3 Rating V & I	4 Associated Loads	5 Duty Cycle	6 Load Power Dissipation	7 P.C. Location	8 Conventional Devices Being Replaced	9 Operational Address	10 Identifier Code	11 Reference Drawings	12 Associated Boolean Equations
381	EMULE DRIVER	V= 28 VDC	ARMAMENT PANEL (59A1) (MISSILE SELECT 28 VDC)				CB11 (5A) AUG-15 DC (36A1)		YAL 381	INSFD FIG.20 ZONE 1A, 3C	381
383	DC-1 POLE	V= 28 VDC	STA 1B BATTERY ARM (28 VDC) MSL UMB 75CA3P12-J				CB15 (10A) R AIM-7 BTRY ARM (36A1) P/O K45-STA 1 AIM-7 BTRY (LEFT GLOVE RELAY BOX 773A1)	08Q36	ACL 383	INSFD FIG.20 ZONE 3A, 7B 30B, 60C	383
384	DC-1 POLE	V= 28 VDC	STA 3F BATTERY ARM (28 VDC) MSL UMB 273P100(A) -J				CB15 (10A) R AIM-7 BTRY ARM (36A1) P/O K46 - STA 3 AIM-7 BTRY (LEFT GLOVE RELAY BOX 773A1)	08Q37	ACL 384	INSFD FIG.20 ZONE 3A, 7B 25B, 60C	384
385	DC-1 POLE	V= 28 VDC	STA 4F BATTERY ARM (28 VDC) MSL UMB 273P100 (B)-J				CB15 (10A) R AIM-7 BTRY ARM (36A1) P/O K47 - STA 4 AIM-7 BTRY (LEFT GLOVE RELAY BOX 773A1)	08Q38	ACL 385	INSFD FIG.20 ZONE 3A, 7C 26B, 60C	385
386	DC-1 POLE	V= 28 VDC	STA 5F BATTERY ARM (28 VDC) MSL UMB 273P100 (C)-J				CB16 (10A) L AIM-7 BTRY ARM (36A1) P/O K48 - STA 5 AIM-7 BTRY (LEFT GLOVE RELAY BOX 773A1)	08Q39	ACL 386	INSFD FIG.20 ZONE 3A, 7C 27B, 60C	386
387	DC-1 POLE	V= 28 VDC	STA 6F BATTERY ARM (28 VDC) MSL UMB 273P100 (D)-J				CB16 (10A) L AIM-7 BTRY ARM (36A1) P/O K49 - STA 6 AIM-7 BTRY (LEFT GLOVE RELAY BOX 773A1)	08Q40	ACL 387	INSFD FIG.20 ZONE 3A, 7C 28B, 60C	387
388	DC-1 POLE	V= 28 VDC	STA 8B BATTERY ARM (28 VDC) MSL UMB 75CA3P12-J				CB16 (10A) L AIM-7 BTRY ARM (36A1) P/O K50 - STA 8 AIM-7 BTRY (LEFT GLOVE RELAY BOX 773A1)	08Q41	ACL 388	INSFD FIG.20 ZONE 3B, 7B 31C, 60C	388

FIGURE 20 SHEET 6

TABLE II F-14 SOLID STATE POWER CONTROLLERS AND DRIVERS

1 Table Item #	2 Type of Power Controller	3 Rating V & I	4 Associated Loads	5 Duty Cycle	6 Load Power Dissipation	7 P.C. Location	8 Conventional Devices Being Replaced	9 Operational Address	10 Identifier Code	11 Reference Drawings	12 Associated Boolean Equations
389	DC-1 POLE	$V = 28$ VIC	STA 1B MOTOR FIRE A AND B SPARROW LAUNCHER (STA 1B, 85A3)				CB5 (10A) MOTOR FIRE A CB4 (10A) MOTOR FIRE B (36A4) P/O K45 STA 1 A1M-7 FIRE (LEFT GLOVE RELAY BOX 773A1) P/O POWER SWITCHING UNIT (85A2)	08Q42	AGL 389	IMSFD FIG. 20 ZONE 3A, 7A 21B, 22C, 25C 60C	389
390	DC-1 POLE	$V = 28$ VIC	STA 8B MOTOR FIRE A AND B SPARROW LAUNCHER (STA 8B, 85A3)				CB5 (10A) MOTOR FIRE A CB4 (10A) MOTOR FIRE B (36A4) P/O K50 STA 8 A1M-7 FIRE (LEFT GLOVE RELAY BOX 773A1) P/O POWER SWITCHING UNIT (85A2)	08Q43	AGL 390	IMSFD FIG. 20 ZONE 3A, 8B 21B, 22C, 60C	390
391	DC-1 POLE	$V = 28$ VIC	STA 1F MOTOR FIRE A AND B SPARROW LAUNCHER (STA 1F, 85A1)				CB5 (10A) MOTOR FIRE A CB4 (10A) MOTOR FIRE B (36A4) P/O K46 STA 1 A1M-7 FIRE (LEFT GLOVE RELAY BOX 773A1) P/O POWER SWITCHING UNIT (85A2)	08Q44	AGL 391	IMSFD FIG. 20 ZONE 3A, 8B 21B, 22C, 60C	391
392	DC-1 POLE	$V = 28$ VIC	STA 6F MOTOR FIRE A AND B SPARROW LAUNCHER (STA 6F, 85A3)				CB5 (10A) MOTOR FIRE A CB4 (10A) MOTOR FIRE B (36A4) P/O K49 STA 6 A1M-7 FIRE (LEFT GLOVE RELAY BOX 773A1) P/O POWER SWITCHING UNIT (85A2)	08Q45	AGL 392	IMSFD FIG. 20 ZONE 3A, 8B 21B, 22C, 60C 26C	392



TABLE II. P-14 SOLID STATE POWER CONTROLLERS AND DRIVERS

1 Table Item #	2 Type of Power Controller	3 Rating V & I	4 Associated Loads	5 Duty Cycle	6 Load Power Dissipation	7 P.C. Location	8 Conventional Devices Being Replaced	9 Operational Address	10 Identifier Code	11 Reference Drawings	12 Associated Boolean Equations
393	DC-1 POLE	N= 28 VDC	STA 5F MOTOR FIRE A AND B SEABROW LAUNCHER (STA 5F) (85A3)				CB5 (10A) MOTOR FIRE A CB4 (10A) MOTOR FIRE B (36A4) P/O K48 STA 5 AIM-7 BTRY (LEFT GLOVE RELAY BOX 773A1) P/O POWER SWITCHING UNIT (85A2)	08Q46	AGL 393	INSFD FIG.20 ZONE 3A, 7C 21B, 22C, 60C 38C	393
394	DC-1 POLE	N= 28 VDC	STA 4F MOTOR FIRE A AND B SEABROW LAUNCHER (STA 4F) (85A3)				CB5 (10A) MOTOR FIRE A CB4 (10A) MOTOR FIRE B (36A4) P/O K47 STA 4 AIM-7 BTRY (LEFT GLOVE RELAY BOX 773A1) P/O POWER SWITCHING UNIT (85A2)	08Q47	AGL 394	INSFD FIG.20 ZONE 3A, 6C 21B, 22C, 60C, 27C	394
395	DC-1 POLE	N= 28 VDC I= SA	a) POWER SUPPLY PP-6675/AMG-69 (27A24A1) (730) b) MISSILE DATA COUNTER (27A24A2) (710) c) MISSILE CONTROLLER (27A24A2) (720)	100%			CB46 (5A) NSL AUX SUB SYS (36A4)	08Q48	AGL 395	INSFD FIG.20 ZONE 3A, 34A	395
396	DC-1 POLE	N= 28 VDC	STA 1B, 3B, 4B, 5B, 6B, 8B AIM-54 NSL (28 VDC) PHOENIX LAUNCHER (766A6)				CB49 (5A) AIM-54 NSL (36A4)	08Q49	AGL 396	INSFD FIG.20 ZONE 3B, 90C 94A, 98A, 100A 102A, 92C	396

TABLE III F-14 SOSTEI BOOLEAN EQUATIONS

1 Table Item #	2 Boolean Equation	3 Transducer List Cross Reference	4 Solid State Controller List Cross Reference	5 Bus/Load Management Priority	6 Special Considerations	7 Reference Drawings	8 Equation Description & Notes
348	AGL 348 = AGS 261	261	348	3	L. MAIN BUS	INSFD FIG. 20 ZONE 1A, 3A, 64A, 27B	STA 4F AIM-7 FWR (115VAC PH A) = STA 4 AIM-7 FWR ENABLE
349	AGL 349 = AGS 261	261	349	3	L. MAIN BUS	INSFD FIG. 20 ZONE 2A, 5A, 64A, 27B	STA 4F AIM-7 FWR (115VAC PH B) = STA 4 AIM-7 FWR ENABLE
350	AGL 350 = AGS 261	261	350	3	L. MAIN BUS	INSFD FIG. 20 ZONE 3A, 5A, 64A, 27B	STA 4F AIM-7 FWR (115VAC PH C) = STA 4 AIM-7 FWR ENABLE
351	AGL 351 = AGS 262	262	351	3	L. MAIN BUS	INSFD FIG. 20 ZONE 1A, 5A, 64A, 28B	STA 5F AIM-7 FWR (115VAC PH A) = STA 5F AIM-7 FWR ENABLE
352	AGL 352 = AGS 262	262	352	3	L. MAIN BUS	INSFD FIG. 20 ZONE 2A, 5A, 64A, 27B	STA 5F AIM-7 FWR (115VAC PH B) = STA 5F AIM-7 FWR ENABLE
353	AGL 353 = AGS 262	262	352	3	L. MAIN BUS	INSFD FIG. 20 ZONE 3A, 5A, 64A, 27B	STA 5F AIM-7 FWR (115VAC PH C) = STA 5F AIM-7 FWR ENABLE
354	AGL 354 = AGS 263	263	354	3	L. MAIN BUS	INSFD FIG. 20 ZONE 1A, 5B, 64A, 25B	STA 3F AIM-7 FWR (115VAC PH A) = STA 3F AIM-7 FWR ENABLE
355	AGL 355 = AGS 263	263	355	3	L. MAIN BUS	INSFD FIG. 20 ZONE 2A, 5B, 25B, 64A	STA 3F AIM-7 FWR (115VAC PH B) = STA 3F AIM-7 FWR ENABLE
356	AGL 356 = AGS 263	263	356	3	L. MAIN BUS	INSFD FIG. 20 ZONE 3A, 5B, 25B, 64A	STA 3F AIM-7 FWR (115VAC PH C) = STA 3F AIM-7 FWR ENABLE
357	AGL 357 = AGS 264	264	357	3	L. MAIN BUS	INSFD FIG. 20 ZONE 1A, 5B, 26B, 64B	STA 6F AIM-7 FWR (115VAC PH A) = STA 6F AIM-7 FWR ENABLE
358	AGL 358 = AGS 264	264	358	3	L. MAIN BUS	INSFD FIG. 20 ZONE 2A, 5B, 26B, 64B	STA 6F AIM-7 FWR (115VAC PH B) = STA 6F AIM-7 FWR ENABLE

TABLE III F-14 SUSTEN BOOLEAN EQUATIONS

1	2	3	4	5	6	7	8
Table Item #	Boolean Equation	Transducer List Cross Reference	Solid State Controller List Cross Reference	Bus/Load Management Priority	Special Considerations	Reference Drawings	Equation Description & Notes
359	AGL 359 = AGS 264	264	359	3	L. MAIN BUS	INSFD FIG. 20 ZONE 3A, 5B 26B, 64B	STA 6F ADM-7 PWR (115VAC PH C) = STA 6F ADM-7 PWR ENABLE
360	AGL 360 = AGS 265	265	360	3	L. MAIN BUS	INSFD FIG. 20 ZONE 1A, 5B 29B, 64A	STA 1B ADM-7 PWR (115VAC PH A) = STA 1B ADM-7 PWR ENABLE
361	AGL 361 = AGS 265	265	361	3	L. MAIN BUS	INSFD FIG. 20 ZONE 1B, 5B 29B, 64A	STA 1B ADM-7 PWR (115VAC PH B) = STA 1B ADM-7 PWR ENABLE
362	AGL 362 = AGS 265	265	362	3	L. MAIN BUS	INSFD FIG. 20 ZONE 1C, 5C 29B, 64A	STA 1B ADM-7 PWR (115VAC PH C) = STA 1B ADM-7 PWR ENABLE
363	AGL 363 = AGS 266	266	363	3	L. MAIN BUS	INSFD FIG. 20 ZONE 1A, 5C 32B, 64B	STA 8B ADM-7 PWR (115VAC PH A) = STA 8B ADM-7 PWR ENABLE
364	AGL 364 = AGS 266	266	364	3	L. MAIN BUS	INSFD FIG. 20 ZONE 1B, 5C 32B, 64B	STA 8B ADM-7 PWR (115VAC PH B) = STA 8B ADM-7 PWR ENABLE
365	AGL 365 = AGS 266	266	365	3	L. MAIN BUS	INSFD FIG. 20 ZONE 1C, 5C 32B, 64B	STA 8B ADM-7 PWR (115VAC PH C) = STA 8B ADM-7 PWR ENABLE
366	AGL 366 = AGS 267	267	366	3	L. MAIN BUS	INSFD FIG. 20 ZONE 1A, 6C 34A, 60A	MSL AUX PWR (115VAC PH A) = MSL AUX PWR - ENABLE
367	AGL 367 = AGS 367	267	367	3	L. MAIN BUS	INSFD FIG. 20 ZONE 1B, 6C 34A, 60A	MSL AUX PWR (115VAC PH B) = MSL AUX PWR - ENABLE
368	AGL 368 = AGS 267	267	368	3	L. MAIN BUS	INSFD FIG. 20 ZONE 1C, 6C 34A, 60A	MSL AUX PWR (115VAC PH C) = MSL AUX PWR - ENABLE
369	AGL 369 = AGS 268	268	369	3	L. MAIN BUS	INSFD FIG. 20 ZONE 1C, 7A 103A, 105A	STA 5H ADM-54 MSL HTR PWR - 115VAC PH C = ADM-54 HTR PWR - ON

TABLE III F-14 SOSTEL BOOLEAN EQUATIONS

1 Table Item #	2 Boolean Equation	3 Transducer List Cross Reference	4 Solid State Controller List Cross Reference	5 Bus/Load Management Priority	6 Special Considerations	7 Reference Drawings	8 Equation Description & Notes
370	AGL 370 = AGS 268	268	370	3	L. MAIN BUS	INSPD FIG. 20 ZONE 1C, 7A 10A	STA 6R AIM-54 MSL HTR PHR - 115VAC PH L = AIM-54 HTR PHR - ON
371	AGL 371 = AGS 268	268	371	3	L. MAIN BUS	INSPD FIG. 20 ZONE 1B, 7A 93B	STA 3R AIM-54 MSL HTR PHR - 115VAC PH B = AIM-54 HTR PHR - ON
372	AGL 372 = AGS 268	268	372	3	L. MAIN BUS	INSPD FIG. 20 ZONE 1B, 7A 95A, 97A	STA 4R AIM-54 MSL HTR PHR - 115VAC PH B = AIM-54 HTR PHR - ON
373	AGL 373 = AGS 268	268	373	3	L. MAIN BUS	INSPD FIG. 20 ZONE 1A, 7A 89C	STA 1B AIM-54 MSL HTR PHR - 115VAC PH A = AIM-54 HTR PHR - ON
374	AGL 374 = AGS 268	268	374	3	L. MAIN BUS	INSPD FIG. 20 ZONE 1A, 7A 91C	STA 8B AIM-54 MSL HTR PHR - 115VAC PH A = AIM-54 HTR PHR - ON
381	YAL 381 = YAS 261	281	381	1	ESS. NO. 1 BUS	INSPD FIG. 20 ZONE 1A, 3C	ARMAMENT PANEL - MISSILE SELECT 28VDC = WEAPON SELECTOR SM - PH SP
383	AGL 383 = AGS 269	269	383	3	L. MAIN BUS	INSPD FIG. 20 ZONE 3A, 7B, 30B, 60C	STA 1B BATTERY ARM (28VDC) = STA. 1B AIM-7 BATTERY-ARM AND HYDR - ENABLE
384	AGL 384 = AGS 270	270	384	3	L. MAIN BUS	INSPD FIG. 20 ZONE 3A, 7B, 25B, 60C	STA 3P BATTERY ARM (28VDC) = STA 3P AIM-7 BATTERY-ARM AND HYDR - ENABLE
385	AGL 385 = AGS 271	271	385	3	L. MAIN BUS	INSPD FIG. 20 ZONE 3A, 7C 26B, 60C	STA 4P BATTERY ARM (28VDC) = STA 4P AIM-7 BATTERY-ARM AND HYDR - ENABLE
386	AGL 386 = AGS 272	272	386	3	L. MAIN BUS	INSPD FIG. 20 ZONE 3B, 7C 27B, 60C	STA 5P BATTERY ARM (28VDC) = STA 5P AIM-7 BATTERY - ARM AND HYDR - ENABLE
387	AGL 387 = AGS 273	273	387	3	L. MAIN BUS	INSPD FIG. 20 ZONE 3B, 7C 26B, 60C	STA 6P BATTERY ARM (28VDC) = STA 6P AIM-7 BATTERY - ARM AND HYDR - ENABLE
388	AGL 388 = AGS 274	274	388		L. MAIN BUS	INSPD FIG. 20 ZONE 3B, 7B 31C, 60C	STA 8B BATTERY ARM (28VDC) = STA 8B AIM-7 BATTERY - ARM AND HYDR - ENABLE

TABLE III F-14 SUSTEL BOOLEAN EQUATIONS

1 Table Item #	2 Boolean Equation	3 Transducer List Cross Reference	4 Solid State Controller List Cross Reference	5 Bus/Load Management Priority	6 Special Considerations	7 Reference Drawings	8 Equation Description & Notes
389	AGL 389 = AGS 269 = AGS 275	269 275	389	3	L. MAIN BUS	INSFD FIG. 20 ZONE 3A, 7A 21B, 22C, 29C 60C	STA 1B MOTOR FIRE A AND B = STA 1B AIM-7 BATTERY - ARM AND HYDR - ENABLE AND AIM-7 MOTOR FIRE-SEL
390	AGL 390 = AGS 274 = AGS 275	274 275	390	3	L. MAIN BUS	INSFD FIG. 20 ZONE 3A, 8B 21B, 20C, 60C	STA 8B MOTOR FIRE A AND B = STA 8B AIM-7 BATTERY-ARM AND HYDR-ENABLE AND AIM-7 MOTOR FIRE-SEL
391	AGL 391 = AGS 270 = AGS 275	270 275	391	3	L. MAIN BUS	INSFD FIG. 20 ZONE 3A, 8B, 21B 20C, 60C, 20C	STA 3F MOTOR FIRE A AND B = STA 3F AIM-7 BATTERY-ARM AND HYDR-ENABLE AND AIM-7 MOTOR FIRE-SEL
392	AGL 392 = AGS 273 = AGS 275	274 275	392	3	L. MAIN BUS	INSFD FIG. 20 ZONE 3A, 8B 21B, 20C, 60C 26C	STA 6F MOTOR FIRE A AND B = STA 6F AIM-7 BATTERY - ARM AND HYDR-ENABLE AND AIM-7 MOTOR FIRE- SEL
393	AGL 393 = AGS 272 AGS 275	272 275	393	3	L. MAIN BUS	INSFD FIG. 20 ZONE 3A, 7C 21B, 22C, 60C 28C	STA 5F MOTOR FIRE A AND B = STA 5F AIM-7 BATTERY-ARM AND HYDR - ENABLE AND AIM-7 MOTOR FIRE - SEL
394	AGL 394 = AGS 271 AGS 275	271 275	394	3	L. MAIN BUS	INSFD FIG. 20 ZONE 3A, 8C, 21B, 22C, 60C 27C	STA 4F MOTOR FIRE A AND B = STA 4F AIM-7 BATTERY - ARM AND HYDR - ENABLE AND AIM-7 MOTOR FIRE - SEL
395	AGL 395	N/A	395	3	L. MAIN BUS	INSFD FIG. 20 ZONE 3A, 9A	MISSILE DATA CONVERTER AND MISSILE CONTROLLER AND POWER SUPPLY PP-6675/ANG-9 (28VDC) = 28VDC LEFT MAIN BUS ENERGIZED
396	AGL 396	N/A	396	3	L. MAIN BUS	INSFD FIG. 20 ZONE 3B, 90C 94A, 96A, 106A 102A, 90C	STA 1B, 3A, 4A, 5A, 6A, 8B AIM-54 MSL (28VDC) = 28VDC LEFT MAIN BUS - ENERGIZED



TABLE I. F-14 SOSTEL SIGNAL TRANSDUCERS

FIGURE 27 SHEET 1

1 Table Item #	2 Signal Name/Function	3 Identifier Code	4 Signal Source Box Identification	5 Point of Origin	6 Transducer Type	7 Present Signal Characteristics	8 Associated Loads	9 Conventional Switches Being Replaced or Deleted	10 Operational Address	11 Reference Drawings	12 Associated Boolean Equation	13 Conditioning Technique
276	DATA LINK ANTENNA SELECT	RUS 276	DATA LINK SYSTEM	FS 300	RELAY DRIVER SIGNAL	OPEN/GND	DATA LINK TRANSMISSION SWITCH (23SL)	N/A	05018	IWSFD FIG. 27 ZONE 14B	376	EXTERNAL SIGNAL ADAPTER

TABLE II FULL-SOLID-STATE POWER CONTROLLERS AND DRIVERS

1 Table Item #	2 Type of Power Controller	3 Rating V & I	4 Associated Loads	5 Duty Cycle	6 Load Power Dissipation	7 P.C. Location	8 Conventional Devices Being Replaced	9 Operational Address	10 Identifier Code	11 Reference Drawings	12 Associated Boolean Equations
375	DC-1 POLE	V=28VDC I= 5A	NO. 2 UHF RADIO PANEL -28VDC (159A1)	100%			CE62 (5A) UNF NO. 2 (3642)	03Q18	HUL 375	INSFD FIG. 27 ZONE 1B, 13A	375
376	RELAY DRIVER	V=28VDC	DATA LINK TRANSMISSION LINE SWITCH (1331) RELAY				CE18 (3A) ASM-27 (3644)		HUL 376	INSFD FIG. 27 ZONE 1C, 14C	376

TABLE III P-14 SOSTEL BOOLEAN EQUATIONS

1 Table Item #	2 Boolean Equation	3 Transducer List Cross Reference	4 Solid State Controller List Cross Reference	5 Bus/Load Management Priority	6 Special Considerations	7 Reference Drawings	8 Equation Description & Notes
375	HUL 375	N/A	375	2	ESS. NO. 2 BUS	INSFD FIG. 20 ZONE 1B, 13A	NO. 2 UHF RADIO PANEL (28VDC) = NO. 2 28VDC BUS ENERGIZED
376	HUL 376 = BUS 276	276	376	3	LEFT MAIN BUS	INSFD FIG. 20 ZONE 1C, 14C	DATA LINK TRANSMISSION LINE SWITCH - ENERGIZED = DATA LINK ANTENNA - SELECT

FIGURE 29 SHEET 1

TABLE 1 P-14 BOOSTER SIGNAL TRANSDUCERS

1 Table Item #	2 Signal Name/Function	3 Identifier Code	4 Signal Source Box Identification	5 Point of Origin	6 Transducer Type	7 Present Signal Characteristics	8 Associated Loads	9 Conventional Switches Being Replaced or Deleted	10 Operational Address	11 Reference Drawings	12 Associated Boolean Equation	13 Conditioning Technique
509	LEFT AUX FLAP- EXTEND	CMS 509	LEFT AUX FLAP EXTEND SWITCH (5183)	LEFT WING FS 600 BL 130	SPDT LIMIT SWITCH	OPEN/GRD	FAIL MONITOR LIGHT DRIVER P/O ADC (05A1)	LEFT AUX FLAP EXTEND SM (5183)	06P24	IMSPD FIG. 29 ZONE 3A	521	SOLID STATE
510	RIGHT AUX FLAP- EXTEND	CMS 510	RIGHT AUX FLAP EXTEND SWITCH (5184)	RIGHT WING FS 600 BL 130	SPDT LIMIT SWITCH	OPEN/GRD	FAIL MONITOR LIGHT DRIVER P/O ADC (05A1)	RIGHT AUX FLAP EXTEND SM (5184)	07P23	IMSPD FIG. 29 ZONE 3B	522	SOLID STATE
511	RIGHT INBOARD MAN. FLAP-EXTEND	CMS 511	RIGHT INBOARD MANEUVER FLAP SWITCH (5182)	RIGHT WING TRAILING FS 600 BL 200	DPDT LIMIT SWITCH	OPEN/GRD	MODE LOGIC PROCESSOR P/O ADC (05A1)	RIGHT INBOARD MANEUVER FLAP SM (5182)	07P24	IMSPD FIG. 29 ZONE 3B	523	SOLID STATE
512	LEFT INBOARD MAN. FLAP-EXTEND	CMS 512	LEFT INBOARD MANEUVER FLAP SWITCH (5181)	LEFT WING TRAILING FS 600 BL 200	DPDT LIMIT SWITCH	OPEN/GRD	MODE LOGIC PROCESSOR P/O ADC (05A1)	LEFT INBOARD MANEUVER FLAP SM (5181)	06P25	IMSPD FIG. 29 ZONE 3B	523	SOLID STATE
513	WING POS-> 21°	CMS 513	WING POS SM (51A5)	FS 540 WL 170	SPDT LIMIT SWITCH	OPEN/GRD	MODE LOGIC PROCESSOR P/O ADC (05A1)	N/A	05P08	IMSPD FIG. 29 ZONE 2C	524	RESISTOR DIVIDER ADAPTER
514	WING POS-> 50°	CMS 514	WING POS SM (51A5)	FS 540 WL 170	SPDT LIMIT SWITCH	OPEN/GRD	MODE LOGIC PROCESSOR P/O ADC (05A1)	N/A	05P09	IMSPD FIG. 29 ZONE 2C	525	RESISTOR DIVIDER ADAPTER
515	MASTER RESET- UNFUSED	CMS 515	FUEL MANAGEMENT PANEL (TOTAL)	PILOT'S LEFT VERTICAL CONSOLE FS 225	MONITARY N.O. PUSHBUTTON	OPEN/GRD	FAIL MONITOR LIGHT DRIVER COMPARATOR BIT PROCESSOR P/O ADC (05A1)	MASTER RESET P/O FUEL MANAGEMENT PANEL (TOTAL)	01P28	IMSPD FIG. 29 ZONE 7C, - 13A	526	SOLID STATE
516	MG SHP	MUS 516	MASTER TEST PANEL (73A1)	PILOTS RIGHT SIDE CONSOLE FS 225	ROTARY SM	OPEN/GRD	MODE LOGIC PROCESSOR P/O ADC (05A1)	MASTER TEST SM P/O MASTER TEST PANEL (73A1)	02P25	IMSPD FIG. 29 ZONE 5C, 9C	527	
517	AUX ALTITUDE- RELIABLE	FMS 517	ADC (05A1)	FS 400	RELAY DRIVER SIGNAL	RELIABLE = GND/ RELIABLE = OPEN/ 28VDC	N/A - ALT RELIABLE RELAY (L. GLOVE RELAY BOX 773A1)	N/A	05D19	IMSPD FIG. 29 ZONE 24B, 15C	377 520	EXTERNAL SIGNAL ADAPTER

FIGURE 29 SHEET 1

TABLE II. P-14 SOLID STATE POWER CONTROLLERS AND DRIVERS

1 Table Item #	2 Type of Power Controller	3 Rating V & I	4 Associated Loads	5 Duty Cycle	6 Load Power Dissipation	7 P.C. Location	8 Conventional Devices Being Replaced	9 Operational Address	10 Identifier Code	11 Reference Drawings	12 Associated Boolean Equations
517	AC-3 POLE	V- 115VAC ΦA, B, C	CHANNEL 1 POWER SUPPLY	100%			P/O RIGHT MAIN AC POWER CONTACTOR (6656K2) P/O LEFT MAIN AC POWER CONTACTOR (66A6R1) AC POWER CONTACTOR ASSY (66A6) P/O GROUND COOLING PRESSURE SWITCH SWITCH (5532) K3 L1 AIGS/CAUC INTLK- APT COCKPIT RELAY BOX (793A1) CB5 (3A) CHAN 1 CAUC ΦA CB19 (3A) CHAN 1 CAUC ΦB CB20 (3A) CHAN 1 CAUC ΦB P/O IAC ESS CIRCUIT BREAKER PANEL (35A6) CB35(5A) GRD PWR COOLING INTLK-10 DC MAIN CIRCUIT BREAKER (36A4)	02Q11 02Q12 02Q13	XAL 517	INSFD FIG. 29 ZONE 13A, 3A, 2A, 1A	517
518	AC-1 POLE	V- 115VAC ΦB	WING SLEEP BACKUP CHANNEL POWER SUPPLY	100%			K2 APX-78/R AIGS INTLK P/O APT COCKPIT RELAY BOX (793A1) RIGHT MAIN AC POWER CONTACTOR (66A6K2) LEFT MAIN AC POWER CONTACTOR (66A6R1) P/O AC POWER CONTACTOR ASSY (66A6) GROUND COOLING PRESSURE INTERLOCK SWITCH (5532) CB35(5A) GRD PWR COOLING INTLK-10 DC MAIN CIRCUIT BREAKER (36A4) CB17(3A) CHAN 2 CAUC IAC ESS CIRCUIT BREAKER PANEL (35A6)	02Q14	XAL 518	INSFD FIG. 29 ZONE 13B, 3A, 2A, 1A, 1B	518



TABLE II F-14 SOLID STATE POWER CONTROLLERS AND DRIVERS

1 Table Item #	2 Type of Power Controller	3 Rating V & I	4 Associated Loads	5 Duty Cycle	6 Load Power Dissipation	7 P.C. Location	8 Conventional Devices Being Replaced	9 Operational Address	10 Identifier Code	11 Reference Drawings	12 Associated Boolean Equations
519	DC-1 POLE	V= 28VDC	NFO SERVO PNEUMATIC ALTIMETER POWER SUPPLY (5204) PILOT SERVO PNEUMATIC ALTIMETER POWER SUPPLY (5203)	100%			CB35 A/S IND/BOARO ALTIM DC (3642) P/O B DC ESS 2 CIRCUIT BREAKER PANEL (3642)	03Q19	PKL 519	INSFD FIG. 29 ZONE 47B, 47C 1C	519
520	AC-1 POLE	V= 115VAC 40	NFO SERVO PNEUMATIC ALTIMETER SOLINOID & SERVO MOTOR (5204) PILOT SERVO				P/O 442 ALT RELIABLE LEFT GLOVE RELAY BOX (773A1) CB35 A/S IND/BOARO ALTIM DC 8 DC ESS 2 CIRCUIT BREAKER PANEL (3642) CB17 A/S IND/BOARO ALTIM AC 5 AC ESS 2 0A CIRCUIT BREAKER PANEL (3642)	03Q20	PKL 520	INSFD FIG. 29 ZONE 47A, 47C 45B, 24B, 2B 1C	520
521	LAMP DRIVER	V= 0V DC	FAIL MONITOR LIGHT DRIVER P/O ADC (05A1)				LEFT AUX FLAP EXTEND SM (5133)	06D32	CKL 521	INSFD FIG. 29 ZONE 3A, 13A	521
522	LAMP DRIVER	V= 0V DC	FAIL MONITOR LIGHT DRIVER P/O ADC (05A1)				RIGHT AUX FLAP EXTEND SM (5134)	06D33	CKL 522	INSFD FIG. 29 ZONE 3B, 13A	522
523	ENABLE DRIVER	V= 0V DC	MODE LOGIC PROCESSOR P/O ADC (05A1)				RIGHT INBOARD MANEUVER FLAP SM (5132) LEFT INBOARD MANEUVER FLAP SM (5131)	06D34	CKL 523	INSFD FIG. 29 ZONE 3B, 3C, 9C	523
524	ENABLE DRIVER	V= 0VDC	MODE LOGIC PROCESSOR P/O ADC (05A1)				P/O WING POS. SM (51A5)	06D35	CKL 524	INSFD FIG. 29 ZONE 2C, 9C	524
525	ENABLE DRIVER	V= 0VDC	MODE LOGIC PROCESSOR P/O ADC (05A1)				P/O WING POS SM (51A5)	06D36	CKL 525	INSFD FIG. 29 ZONE 2C, 9C	525
526	ENABLE DRIVER	V= 0VDC	FAIL MONITOR LIGHT DRIVER FAIL MONITOR COMPARATOR P/O ADC (05A1)				MASTER RESET P/O FUEL MANAGEMENT PANEL (TOTAL)	06D37	CKL 526	INSFD FIG. 29 ZONE 7C, 13A	526

TABLE II 2-14 SOLID STATE POWER CONTROLLERS AND DRIVERS

1 Table Item #	2 Type of Power Controller	3 Rating V & I	4 Associated Loads	5 Duty Cycle	6 Load Power Dissipation	7 P.C. Location	8 Conventional Devices Being Replaced	9 Operational Address	10 Identifier Code	11 Reference Drawings	12 Associated Boolean Equations
527	ENABLE DRIVER	V= 0VDC	MODE LOGIC PROCESSOR P/O ADC (05A1)				MASTER TEST SM P/O MASTER TEST PANEL (734A1)	06D38	CXL 527	INSPD FIG. 29 ZONE 5C, 9C	527
528	ENABLE DRIVER	V= 0VDC	MODE LOGIC PROCESSOR P/O ADC (05A1)				P/O K12 MM NIGHT GLOVE RELAY BOX (772A1)	06D39	CXL 528	INSPD FIG. 29 ZONE 6C, 13A 9C	528

TABLE III F-14 SOSTEL BOOLEAN EQUATIONS

1	2	3	4	5	6	7	8
Table Item #	Boolean Equation	Transducer List Cross Reference	Solid State Controller List Cross Reference	Bus/Load Management Priority	Special Considerations	Reference Drawings	Equation Description & Notes
517	XAL 517 = XAS 003 + XAS 004 + HMS 005	003 004 005	517	2	ESS. NO. 2 BUS	INSFO FIG. 29 ZONE 3A, 2A, 1A	CHANNEL 1 PWR SUPPLY - ON - RIGHT MAIN AC PWR-ON LINE OR LEFT MAIN AC PWR - ON LINE OR GND COOLING PRESS INTLX - HIGH
518	XAL 518 = XAS 003 + XAS 004 + HMS 005	003 004 005	518	2	ESS. NO. 2 BUS	INSFO FIG. 29 ZONE 13B, 3A, 2A 1A, 1B	WING SKEEP BACKUP CHANNEL POWER SUPPLY - ON - RIGHT MAIN AC PWR-ON LINE OR LEFT MAIN AC PWR-ON LINE OR GND COOLING PRESS INTLX-HIGH
519	PXL 519	N/A	519	2	ESS. NO. 2 BUS	INSFO FIG. 29 ZONE 47B, 47C, 1C	NFO AND PILOT SERVO PNEUMATIC ALTITUDE POWER SUPPLY-ON - 28V ESSENTIAL NO. 2 BUS-ON
520	PXL 520 = PKX 517	517	520	2	ESS. NO. 2 BUS	INSFO FIG. 29 ZONE 47A, 47C 45B, 24B, 26 1C	PILOT MACH-AIRSPED INDICATOR AND NFO AND PILOT SERVO PNEUMATIC ALTITUDE SELENOID & SERVO MOTOR-ON - AUC ALTITUDE RELIABLE
521	CKL 521 = CKS 509	509	521	2	ESS. NO. 2 BUS	INSFO FIG. 29 ZONE 3A, 13A	LEFT AUX FLAP EXTEND - LEFT AUX FLAP EXTEND SM-EXTEND
522	CKL 522 = CKS 510	510	522	2	ESS. NO. 2 BUS	INSFO FIG. 29 ZONE 3B, 15A	RIGHT AUX FLAP EXTEND - RIGHT AUX FLAP EXTEND SM-EXTEND
523	CKL 523 = (CKS 511) (CKS 512)	511 512	523	2	ESS. NO. 2 BUS	INSFO FIG. 29 ZONE 2B, 3C, 9C	MANEUVER FLAPS RETRACTED - RIGHT AND LEFT INSURD MANEUVER FLAP SWITCHES - EXTEND NOT
524	CKL 524 = CKS 513	513	524	2	ESS. NO. 2 BUS	INSFO FIG. 29 ZONE 2C, 9C	WING SKEEP > 21° = WING POS SM - > 21°
525	CKL 525 = CKS 514	514	525	2	ESS. NO. 2 BUS	INSFO FIG. 29 ZONE 2C, 9C	INHIBIT MANEUVER FLAPS = WING POS - > 50°
526	CKL 526 = CKS 515	515	526	2	ESS. NO. 2 BUS	INSFO FIG. 29 ZONE 7C, 13A	AIC MASTER RESET = MASTER RESET SWITCH - DEPRESS
527	CKL 527 = MJS 068 • MJS 516	068 516	527	2	ESS. NO. 2 BUS	INSFO FIG. 29 ZONE 9C, 9C	WING SKEEP TEST SELECT = TEST SELECTOR - DEPRESS AND MG SMP
528	CKL 528 = GDS 002 • GDS 102	002 102	528	2	ESS. NO. 2 BUS	INSFO FIG. 29 ZONE 6C, 13A, 9A	WOW (TO AIC) = LEFT AND RIGHT MIG-WEIGHT ON WHEELS

FIGURE 30 SHEET 1

TABLE 1 F-14 HOSTEL SIGNAL TRANSDUCERS

1 Table Item #	2 Signal Name/Function	3 Identifier Code	4 Signal Source Box Identification	5 Point of Origin	6 Transducer Type	7 Present Signal Characteristics	8 Associated Loads	9 Conventional Switches Being Replaced or Deleted	10 Operational Address	11 Reference Drawings	12 Associated Boolean Equation	13 Conditioning Technique
191	NOSE STRUT - EXTD	GAS 191	NOSE STRUT SWITCH (74S1) P/O LANDING GEAR CONTROL PANEL	PILOT'S LEFT VERTICAL CONSOLE STA 225	TOGGLE SWITCH DPDTCC (SPRING LOADED TO C.O.)	EXTD - SWITCHED 28VDC OFF = OPEN	EXTENDED SOLINOID P/O NLG TRANSFER VALVE (74L1)	NOSE STRUT SWITCH (74S1)	01P29	INSFD FIG. 30 ZONE 6B	279	SOLID STATE
192	NOSE STRUT - KNEEL	GAS 192	NOSE STRUT SWITCH (74S1) P/O LANDING GEAR CONTROL PANEL	PILOT'S LEFT VERTICAL CONSOLE STA 225	TOGGLE SWITCH DPDTCC (SPRING LOADED TO C.O.)	KNEEL-SWITCHED 28VDC OFF-OPEN	KNEEL SOLINOID P/O NLG TRANSFER VALVE (74L1)	NOSE STRUT SWITCH (74S1)	01P30	INSFD FIG. 30 ZONE 6B	280 281 287	SOLID STATE
193	LAUNCH BAR EXTENDED	GAS 193	P/O LAUNCH BAR PROXIMITY SWITCH (74S2)	NLG SHOCK STRUT STA 250 NL 101	PROXIMITY SWITCH	EXTENDED-SWITCHED 28VDC RETRACTED-OPEN	K93 - LAUNCH BAR NOT STOWED (11-GLOVE RELAY BOX 77341) LAUNCH BAR ADVISORY INDICATOR LITE	LAUNCH BAR PROXIMITY SWITCH (74S2)	03P09	INSFD FIG. 30 ZONE 5B	281 287	SOLID STATE
194	LEFT THROTTLE < MIL FMR	GAS 194	THROTTLE QUADRANT (711A1)	PILOT'S LEFT CONSOLE STA 225	LIMIT SWITCH	< MIL FMR = SWITCHED 28VDC > MIL FMR = OPEN	SAME AS ITEM 193	N/A	01P31	INSFD FIG. 30 ZONE 8C	281 287 573	RESISTOR DIVIDER AMPLIFIER
195	RIGHT THROTTLE < MIL FMR	GAS 195	THROTTLE QUADRANT (711A1)	PILOT'S LEFT CONSOLE STA 225	LIMIT SWITCH	< MIL FMR = SWITCHED 28VDC > MIL FMR = OPEN	SAME AS ITEM 193	N/A	01P32	INSFD FIG. 30 ZONE 8C	281 287 573	RESISTOR DIVIDER AMPLIFIER
196	LAUNCH BAR - ABORT	GAS 196	LAUNCH BAR PANEL (74A1)	PILOT'S LEFT VERTICAL CONSOLE STA 225	TOGGLE SWITCH SPDT	ABORT - SWITCHED 28VDC NORMAL-OPEN	SELECTOR SOLINOID P/O LAUNCH BAR ABORT SELECTOR VALVE (74L3)	LAUNCH BAR ABORT SWITCH	01P33	INSFD FIG. 30 ZONE 5C	282	SOLID STATE
197	HOOK - STOWED	GAS 197	ARRESTING HOOK NOT STOWED SWITCH (49S1)	AFT STA 750	LIMIT SWITCH DPDT	STOWED = OPEN NOT STOWED = SWITCHED GND	HOOK SOLINOID P/O ARRESTING HOOK CONTROL VALVE (49L1)	N/A	07P25	INSFD FIG. 30 ZONE 12B	283 287 297	RESISTOR DIVIDER AMPLIFIER



TABLE 1 F-14 SATEL SIGNAL TRANSFERS

1 Table Item #	2 Signal Name/Function	3 Identifier Code	4 Signal Source Box Identification	5 Point of Origin	6 Transducer Type	7 Present Signal Characteristics	8 Associated Loads	9 Conventional Switches Being Replaced or Deleted	10 Operational Address	11 Reference Drawings	12 Associated Boolean Equation	13 Conditioning Technique
198	ANTI-SKID/ SPOILER BK BOTH	QKS 198	ANTI-SKID/SPOILER BK SWITCH-56 P/O FUEL MANAGEMENT PANEL (707A1)	PILOT'S LEFT VERTICAL CONSOLE STA 225	TOGGLE SWITCH	BOTH - SWITCHED 28VDC OFF = OPEN	SKID CONTROL BOX (62A1)	ANTI-SKID/SPOILER BK SWITCH (56)	01P34	INSPD FIG. 30 ZONE 14B	285 312 313 310 311	SOLID STATE
199	AUTO PILOT ENGAGE NOSE WHEEL STEERING PUSHBUTTON SWITCH - ON	QHS 199	CONTROL STICK GRIP (20M4)	PILOT'S COCKPIT STA 225	PUSHBUTTON	ON-SWITCHED 28VDC OFF-SWITCH 28VDC	K28 - NOSE WHEEL STEERING NO. 2 (L. GLOVE RELAY BOX 773A1)	N/A	02P26	INSPD FIG. 30 ZONE 5A	286 287	RESISTOR DIVIDER ADAPTER
200	LEFT THROTTLE IDLE	QKS 200	THROTTLE QUADRANT (711A1)	PILOT'S COCKPIT STA 225	LIMIT SWITCH	IDLE - SWITCHED 28VDC > IDLE = OPEN	K91 - NOSE GEAR HYDRAULIC SHUTOFF VALVE RELAY (L. GLOVE RELAY BOX 773A1)	N/A	01P35	INSPD FIG. 30 ZONE 8B	287 312 313 310 311	RESISTOR DIVIDER ADAPTER
201	RIGHT THROTTLE IDLE	QKS 201	THROTTLE QUADRANT (711A1)	PILOT'S COCKPIT STA 225	LIMIT SWITCH	IDLE - SWITCHED 28VDC > IDLE = OPEN	K91 - NOSE GEAR HYD SHUTOFF VALVE RELAY (L. GLOVE RELAY BOX 773A1)	N/A	01P36	INSPD FIG. 30 ZONE 8B	287 312 313 310 311	RESISTOR DIVIDER ADAPTER
202	NLG DOOR - UP AND LOCKED	QJS 202	NLG DOOR UP AND LOCKED SWITCH (7552)	NOSE WHEEL WELL ST 260 WL 120	LIMIT SWITCH (2 PNT)	UP AND LOCKED = SWITCHED GND UNLOCKED = OPEN	a) UP AND LOCKED FLAG P/O WHEELS POSITION INDICATOR (76M1) b) DST TRANSIT INDICATOR LITE P/O LANDING GEAR HANDLE (765A1)	NLG DOOR UP AND LOCKED SWITCH (7552)	02P27	INSPD FIG. 30 ZONE 19A	290 298	SOLID STATE



TABLE 1. P-14 SUBTEL SIGNAL TRANSDUCERS

FIGURE 30 SHEET 3

1 Table Item #	2 Signal Name/Function	3 Identifier Code	4 Signal Source Box Identification	5 Point of Origin	6 Transducer Type	7 Present Signal Characteristics	8 Associated Loads	9 Conventional Switches Being Replaced or Deleted	10 Operational Address	11 Reference Drawings	12 Associated Boolean Equation	13 Conditioning Technique
203	LEFT MUG - DOWN AND LOCKED	GUS 203	LEFT MUG DOWN AND LOCKED SWITCH (7534) P/O DOWNLOCK ACTUATOR	LEFT MUG STA 570 WL 100	LIMIT SWITCH (DPDT)	DOWN AND LOCKED - SWITCHED GND UNLOCKED = OPEN	LEFT MUG DOWN AND LOCKED FLAG P/O WHEELS FLAP POSITION INDICATOR (7891)	N/A	05P10	INSD FIG. 30 ZONE 20A	291 DIVIDER 298 299	RESISTOR DIVIDER ADAPTER
204	LEFT MUG DOOR UP AND LOCKED	GUS 204	LEFT MUG DOOR LOCKED UNLOCKED SWITCH (7537)	LEFT MUG WHEEL WELL STA 570	LIMIT SWITCH (DPDT)	UP AND LOCKED - SWITCHED GND UNLOCKED = OPEN	LEFT MUG UP AND LOCKED FLAG P/O WHEELS FLAP POSITION INDICATOR (7891)	LEFT MUG DOOR LOCKED UNLOCKED SWITCH (7537)	05P11	INSD FIG. 30 ZONE 20B	292 298	SOLID STATE
205	LEFT MUG POSITION - UP AND LOCKED	GUS 205	LEFT MUG DOOR POSITION SWITCH (75313)	LEFT MUG WHEEL WELL STA 570	LIMIT SWITCH (DPDT)	UP AND LOCKED - SWITCHED GND UNLOCKED = OPEN	LEFT MUG UP AND LOCKED FLAG P/O WHEELS FLAP POSITION INDICATOR (7891)	LEFT MUG DOOR POSITION SWITCH (75313)	05P12	INSD FIG. 30 ZONE 20B	292 298	SOLID STATE
206	RIGHT MUG DOWN AND LOCKED	GUS 206	RIGHT MUG DOWN AND LOCKED SWITCH (7535)	RIGHT MUG STA 570 WL 100	LIMIT SWITCH (DPDT)	DOWN AND LOCKED SWITCHED GND UNLOCKED = OPEN	RIGHT MUG DOWN AND LOCKED FLAG P/O WHEELS FLAP POSITION INDICATOR (7891)	N/A	07P26	INSD FIG. 30 ZONE 20C	293 298 299	RESISTOR DIVIDER ADAPTER
207	RIGHT MUG DOOR - UP AND LOCKED	GUS 207	RIGHT MUG DOOR LOCKED UNLOCKED SWITCH (7536)	RIGHT MUG WHEEL WELL STA 570	LIMIT SWITCH (DPDT)	UP AND LOCKED - SWITCHED GND UNLOCKED = OPEN	RIGHT MUG UP AND LOCKED FLAG P/O WHEELS FLAP POSITION INDICATOR (7891)	R. MUG DOOR LOCKED - UNLOCKED SWITCH (7536)	07P27	INSD FIG. 30 ZONE 20B	294 298	SOLID STATE

TABLE I. F-14 EARTH SIGNAL TRANSMITTERS

1 Table Item #	2 Signal Name/Function	3 Identifier Code	4 Signal Source Box Identification	5 Point of Origin	6 Transducer Type	7 Present Signal Characteristics	8 Associated Loads	9 Conventional Switches Being Replaced or Deleted	10 Operational Address	11 Reference Drawings	12 Associated Boolean Equation	13 Conditioning Technique
208	RIGHT MLG POSITION - UP AND LOCKED	GJS 208	RIGHT MLG DOOR POSITION SWITCH (75S14)	RIGHT MLG WHEEL WELL STA 570	LIMIT SWITCH (DPDT)	UP AND LOCKED = SWITCHED GND UNLOCKED = OPEN	RIGHT MLG UP AND LOCKED FLAG F/O WHEELS POSITION INDICATOR (79M1)	R. MLG DOOR POSITION SWITCH (75S14)	07P28	INSD FIG. 30 ZONE 208	294 296	SOLID STATE
209	LEFT BRAKE PRESSURE - > 400 PSI	GCS 209	LEFT BRAKE PRESSURE SWITCH (47S1)	LEFT SIDE STA 410 WL 130	PRESSURE SWITCH	> 400 PSI SWITCHED < 400 PSI = 28VDC SWITCHED 28VDC	AUX BRK/SKID CAUTION LITE F/O PILOT CAUTION ADVISOR INDICATOR (69A1)	LEFT BRAKE PRESSURE SWITCH (47S1)	05P13	INSD FIG. 30 ZONE 13A	295	SOLID STATE
210	RIGHT BRAKE PRESSURE - > 400 PSI	GCS 210	RIGHT BRAKE PRESSURE SWITCH (47S2)	LEFT SIDE STA 410 WL 130	PRESSURE SWITCH	> 400 PSI = SWITCHED 28VDC < 400 PSI = SWITCHED 28VDC	SAME AS ITEM 209	LEFT BRAKE PRESSURE SWITCH (47S2)	05P14	INSD FIG. 30 ZONE 13A	295	SOLID STATE
211	SKID CONTROL - PWR LOSS	GCS 211	SKID CONTROL BOX (82A1)	NOSE WHEEL WELL STA 260 WL 120	N/A (ENABLE SIGNAL)	ON = 28VDC OFF = OPEN	SAME AS ITEM 209	N/A	05R20	INSD FIG. 30 ZONE 15A	295	EXTERNAL SIGNAL ADAPTER
212	LIGHT TEST - ACTIVE	MJS 212	PILOT CAUTION ADVISOR INDICATOR (69A1)	PILOT'S RIGHT SIDE CONSOLE STA 225	ENABLE SIGNAL	ACTIVE = GND INACTIVE = OPEN	DSI TRANSIT INDICATOR LITE-ET/AL	N/A	07D19	INSD FIG. 30 ZONE 17C	297 298	EXTERNAL SIGNAL ADAPTER
213	LEFT MLG RETRACTED	GBS 213	LEFT BRAKE PROXIMITY SWITCH (75S11)	LEFT FUELSAGE STATION 564	PROXIMITY/ RELAY DRIVEN SWITCH	RETRACTED/PWR OFF = SWITCHED GND EXTENDED = OPEN	DSI TRANSIT INDICATOR LIGHT F/O LANDING GEAR HANDLE (79S1A1)	LEFT BRAKE PROXIMITY SWITCH (75S11)	05P15	INSD FIG. 30 ZONE 19A	298 299	SOLID STATE PROXIMITY SWITCH
214	RIGHT MLG RETRACTED	GBS 214	RIGHT BRAKE PROXIMITY SWITCH (75S12)	RIGHT FUELSAGE STATION 564	PROXIMITY/ RELAY DRIVEN SWITCH	RETRACTED/PWR OFF = SWITCHED GND EXTENDED = OPEN	DSI TRANSIT INDICATOR LIGHT F/O LANDING GEAR HANDLE (79S1A1)	RIGHT BRAKE PROXIMITY SWITCH (75S12)	04P09	INSD FIG. 30 ZONE 19A	298 299	SOLID STATE PROXIMITY SWITCH

TABLE I F-14 SCOTEL SIGNAL TRANSDUCERS

1 Table Item #	2 Signal Name/Function	3 Identifier Code	4 Signal Source Box Identification	5 Point of Origin	6 Transducer Type	7 Present Signal Characteristics	8 Associated Loads	9 Conventional Switches Being Replaced or Deleted	10 Operational Address	11 Reference Drawings	12 Associated Boolean Equation	13 Conditioning Technique
215	FLAP LEVER - > 10°	QUS 215	FLAP LEVER P/O THROTTLE QUADRANT (711A1)	PILOT'S LEFT SIDE CONSOLE STA 225	LIMIT SWITCH	>10° = SWITCHED GND <10° = OPEN	DOWN AND LOCKED GND P/O PILOT CAUTION ADVISORY INDICATOR (69A1)	N/A	OIF37	INSFD FIG. 30 ZONE 18B	299	RESISTOR DIVIDER ADAPTER

TABLE VI. P-14 SOLID STATE POWER CONTROLLERS AND DRIVERS

1 Table Item #	2 Type of Power Controller	3 Setting V & I	4 Associated Loads	5 Duty Cycle	6 Load Power Dissipation	7 P.C. Location	8 Conventional Devices Being Replaced	9 Operational Address	10 Identifier Code	11 Reference Drawings	12 Associated Boolean Equations
278	DC-1 POLE	V-28VDC I-5A	LOCK SOLINOID P/O LANDING GEAR HANDLE (785A1)				CB5 (5A) MLG HANDLE RLX NO. 1 (36A2) P/O K32 MLG SAFETY B (R. GLOVE RELAY BOX 772A1)	03Q21	GDL 278	INSPD FIG. 30 ZONE 4C, 3C 4A, 3A, 1A	278
279	DC-1 POLE	V-28VDC	EXTEND SOLINOID P/O MLG TRANSFER VALVE (7411)				CB44 (5A) MLG STRUT LCH BAR ADJUST (36A2) P/O AC EXTERNAL PMR CONTACTOR (66A6K3) P/O K88-NOSE KNEEL RELAY P/O K1-MLG HANDLE C RELAY P/O K2-MLG SAFETY C RELAY (L. GLOVE RELAY BOX 773A1)	04Q41	GAL 279	INSPD FIG. 30 ZONE 6B, 5B, 1B	279
280	DC-1 POLE	V-28VDC	KNEEL SOLINOID P/O MLG TRANSFER VALVE (7411)				CB44 (4A) MLG STRUT LCH BAR ADJUST (36A2) P/O K88-NOSE KNEEL RELAY P/O K1-MLG HANDLE C RELAY P/O K4-MLG SAFETY C RELAY (L. GLOVE RELAY BOX 773A1)	04Q42	GAL 280	INSPD FIG. 30 ZONE 1B, 6B, 7C	280
281	DC-1 POLE	V-28VDC	SEQUENCING SOLINOID P/O MLG SEQUENCING CONTROL VALVE (7412)				CB44 (5A) MLG STRUT LCH BAR ADJUST (36A2) P/O K53 - LAUNCH BAR NO STOPPED P/O K59 - LAUNCH BAR CAUTION P/O K4-MLG SAFETY L (L. GLOVE RELAY BOX 773A1)	04Q43	GAS 281	INSPD FIG. 30 ZONE 8C, 7C 7B	281
282	DC-1 POLE	V-28VDC	SELECTOR SOLINOID P/O LAUNCH BAR ABOUT SELECTOR VALVE (7413)				CB44 (5A) MLG STRUT LCH BAR ADJUST (36A2)	04Q44	GAL 282	INSPD FIG. 30 ZONE 6C, 5C 1B	282



TABLE II P-14 SOLID STATE POWER CONTROLLERS AND DRIVERS

1 Table Item #	2 Type of Power Controller	3 Rating V & I	4 Associated Loads	5 Duty Cycle	6 Load Power Dissipation	7 P.C. Location	8 Conventional Devices Being Replaced	9 Operational Address	10 Identifier Code	11 Reference Drawings	12 Associated Boolean Equations
283	DC-1 POLE	V-28VDC	HOOK SOLINOID P/O ARRESTING HOOK CONTROL VALVE (49LL)				CB31 (5A) MAIN REL/ ANTI-ICE CONTR/HK CONTR (36A2) P/O K23 HOOK/AUX FLAP ISOLATION (L. GLOVE RELAY BOX 773A1)	0A445	GIL 283	INSFD FIG. 30 ZONE 1B, 11A, 12B	283
284	DC-1 POLE	V-28VDC	UPLACK SOLINOID P/O ARRESTING HOOK CONTROL VALVE (49LL)				CB31 (5A) MAIN REL/ ANTI-ICE CONTR/HK CONTR (36A2) P/O K23- HOOK/AUX FLAP ISOLATION	0A446	GIL 284	INSFD FIG. 30 ZONE 1B, 11A, 12A	284
285	DC-1 POLE	V-28VDC	SKID CONTROL BOX (52A1)				CB15 (5A) ANTI SKID- R AICS LA UP FMR (36A2) P/O RG-MIG HANDLE D	0A448	GIL 285	INSFD FIG. 30 ZONE 14B, 13B 1B	285
286	DC-1 POLE	V-28VDC	NOSE WHEEL STEERING MONITOR (59A1) (28VDC)				CB8 (3A) NOSE WHEEL STEERING AFCS (36A3) P/O K21 MIG SAFETY E P/O K27 NOSE WHEEL STEERING NO. 1 P/O K28 NOSE WHEEL STEERING NO. 2	0A447	GIL 286	INSFD FIG. 30 ZONE 1C, 5A 7A, 9A	286
287	DC-1 POLE	V-28VDC	SHUTOFF SOLINOID P/O NOSE WHEEL STEERING DAMPER UNIT (59A1)				CB8 (3A) NOSE WHEEL STEER AFCS (36A3) P/O K23-LAUNCH BAR NOT STOWED RELAY P/O K24 NOSE GEAR HYDRAULIC SHUT OFF VALVE RELAY P/O K21-MIG SAFETY E (L. GLOVE RELAY BOX 773A1) P/O K7-HOOK NOT STOWED RELAY (R. GLOVE RELAY BOX 773A1)	0A449	GIL 287	INSFD FIG. 30 ZONE 9A, 8A, 8B, 7A, 7B, 5A	287
288	ENABLE DRIVER	(OPEN/GND)	MIG DOWN AND LOCKED FLAG P/O WHEELS-FLAPS POSITION INDICATOR (78A1)				CB8 (3A) WHEELS POS. IND (36A2)	02D46	GIL 288	INSFD FIG. 30 ZONE 17A, 15A 1A	288



TABLE II P-14 SOLID STATE POWER CONTROLLERS AND DRIVERS

1 Table Item #	2 Type of Power Controller	3 Rating V & I	4 Associated Loads	5 Duty Cycle	6 Load Power Dissipation	7 P.C. Location	8 Conventional Devices Being Replaced	9 Operational Address	10 Identifier Code	11 Reference Drawings	12 Associated Booles® Equations
289	ENABLE DRIVER	V-28VDC	WHEEL-FLAPS POSITION INDICATOR - 28VDC PMR (7841)	100%			CB6 (3A) WHEELS POS IND (36A2)	02D47	GLL 289	INSFD FIG. 30 ZONE 17A, 1A	289
290	ENABLE DRIVER	OPEN/GND	M/LG UP AND LOCKED FLAG P/O WHEELS-FLAPS POSITION INDICATOR (7841)				CB6 (3A) WHEELS POS IND (36A2)	02D48	GLL 290	INSFD FIG. 30 ZONE 19A, 17A 1A	290
291	ENABLE DRIVER	OPEN/GND	LEFT M/LG DOWN AND LOCKED FLAG P/O WHEELS-FLAPS POSITION INDICATOR (7841)				CB6 (3A) WHEELS POS IND (36A2)	02D49	GLL 291	INSFD FIG. 30 ZONE 20A, 17A 1A	291
292	ENABLE DRIVER	OPEN/GND	LEFT M/LG UP AND LOCKED FLAG P/O WHEELS-FLAPS POSITION INDICATOR (7841)				CB6 (3A) WHEELS POS IND (36A2)	02D50	GLL 292	INSFD FIG. 30 ZONE 20B, 17A 1A	292
293	ENABLE DRIVER	OPEN/GND	RIGHT M/LG DOWN AND LOCKED FLAG P/O WHEELS-FLAPS POSITION INDICATOR (7841)				CB6 (3A) WHEELS POS. IND (36A2)	02D51	GLL 293	INSFD FIG. 30 ZONE 20C, 17A 1A	293
294	ENABLE DRIVER	OPEN/GND	RIGHT M/LG UP AND LOCKED FLAG P/O WHEELS-FLAPS POSITION INDICATOR (7841)				CB6 (3A) WHEELS POS. IND (36A2)	02D52	GLL 294	INSFD FIG. 30 ZONE 17A, 20B 1A	294
295	ENABLE DRIVER	OPEN/28VDC	AUX B46/SKID CAUTION LAMP P/O PILOT CAUTION ADVISORY INDICATOR				CB19 (5A) HYD VALVE CONTROL (36A2) P/O PWR - TRANSFER PUMP SHUTOFF (LEFT GLOVE RELAY BOX 773A1)	02D53	GLL 295	INSFD FIG. 30 ZONE 1B, 7C 13A, 15A, 17C	295
296	RELAY DRIVER	GND/OPEN	SKID CONTROL BOX (82A1)				N/A	06D04	GLL 296	INSFD FIG. 30 ZONE 15B, 16B	296

FIGURE 30. SHEET 4

TABLE II. P-1A SOLID STATE POWER CONTROLLERS AND DRIVERS

1 Table Item #	2 Type of Power Controller	3 Rating V & I	4 Associated Loads	5 Duty Cycle	6 Load Power Dissipation	7 P.C. Location	8 Conventional Devices Being Replaced	9 Operational Address	10 Identifier Code	11 Reference Drawings	12 Associated Boolean Equations
297	LAMP DRIVER	V-28VDC	HOOK TRANSIT INDICATOR LIGHT DSL P/O HOOK/JUM PANEL (70GAL)				N/A	02D54	GGL 297	INSPD FIG. 30 ZONE 12B, 12A 17C	297
298	LAMP DRIVER	V-28VDC	DSL TRANSIT INDICATOR LIGHT P/O LANDING GEAR HANDLE (785AL)				CH6 (3A) WHEELS POS IND (36A2)	02D55	GIL 298	INSPD FIG. 30 ZONE 18B, 17B 18C, 19A, 20A 20C	298
299	EMERGENCY DRIVER	ON/OFF	DOWN AND LOCKED GND INPUT CAUTION P/O PILOT CAUTION ADVISORY INDICATOR (59AL)				N/A	02D56	MIL 299	INSPD FIG. 30 ZONE 17C, 18C 19A, 20A, 20C	299

TABLE III F-14 SOTEL BOOLEAN EQUATIONS

1	2	3	4	5	6	7	8
Table Item #	Boolean Equation	Transducer List Cross Reference	Solid State Controller List Cross Reference	Bus/Load Management Priority	Special Considerations	Reference Drawings	Equation Description & Notes
278	$GIL\ 278 = GDS\ 002 + GDS\ 102$	002 102	278	2	ESS. NO. 2 BUS	INSFD FIG. 30 ZONE AC, 3C, 4A, 3A, 1A	LANDING GEAR HANDLE LOCK SOLINOID ENERGIZED - (UNLOCKED) - LEFT OR RIGHT MLG - WEIGHT NOT ON WHEELS
279	$GAL\ 279 = (GAS\ 191 + GAS\ 160) \bullet EPS\ 163 + GDS\ 092 \bullet (GDS\ 002 + GDS\ 102)$	002 092 102 163 180 191	279	2	ESS. NO. 2 BUS	INSFD FIG. 30 ZONE 6B, 5B, 1B 7C	MLG TRANSFER VALVE EXTEND SOLINOID ENERGIZED (28VDC) - NOSE STRUT - EXTEND AND EXTERNAL AC PWR - NOT ON LINE OR (COMBINED SYS. PRESS-7450 PSI AND MLG HANDLE - DOWN AND LEFT OR RIGHT MLG - WEIGHT ON WHEELS NOT)
280	$GAL\ 280 = EPS\ 163 \bullet GDS\ 092 \bullet GDS\ 002 \bullet GDS\ 102 \bullet GAS\ 192$	002 092 102 163 192	280	2	ESS. NO. 2 BUS	INSFD FIG. 30 ZONE 1B, 6B 7C	MLG TRANSFER VALVE KNEEL SOLINOID ENERGIZED (28VDC) - COMBINED SYS. PRESS. - >450 PSI AND MLG HANDLE - DOWN AND LEFT AND RIGHT MLG WEIGHT ON WHEELS AND NOSE STRUT - KNEEL
281	$GAL\ 281 = (GAS\ 191 \bullet (GDS\ 002 + GDS\ 102)) \bullet ((GDS\ 194 + GAS\ 195) \bullet EPS\ 163 \bullet GDS\ 092 \bullet GDS\ 002 \bullet GDS\ 102 \bullet GAS\ 192)$	002 092 102 163 192 193 194 195	281	2	ESS. NO. 2 BUS	INSFD FIG. 30 ZONE 7B, 8B, 7C, 5B, 1B	MLG SEQUENCING CONTROL VALVE SOLINOID - ENERGIZED (MLG RETRACTION INHIBITED) - LAUNCH BAR - EXTENDED AND (LEFT OR RIGHT MLG-WEIGHT ON WHEELS NOT) OR (LEFT OR RIGHT THROTTLE - <41L PWR) AND COMBINED SYS. PRESS. - >450 PSI AND MLG HANDLE - DOWN AND LEFT AND RIGHT MLG - WEIGHT ON WHEELS AND NOSE STRUT KNEEL
282	$GAL\ 282 = GAS\ 196$	196	282	2	ESS. NO. 2 BUS	INSFD FIG. 30 ZONE 6C, 5C, 1B	LAUNCH BAR ABORT SELECTOR VALVE SOLINOID ENERGIZED LAUNCH BAR - ABORT
283	$GIL\ 283 = DMS\ 032 \bullet GDS\ 002 \bullet GDS\ 102 \bullet (GDS\ 002 + GDS\ 102)$	032 049 197 002 102	283	2	ESS. NO. 2 BUS	INSFD FIG. 30 ZONE 1B, 11A, 12A	ARRESTING HOOK CONTROL VALVE (HOOK SOLINOID) - ENERGIZED = FIT HYD PRESS - NORMAL AND HOOK CONTROL HANDLE - UP AND HOOK - NOT STORED AND LEFT OR RIGHT MLG - WEIGHT ON WHEELS NOT
284	$GIL\ 284 = DMS\ 032 \bullet GDS\ 049 \bullet (GDS\ 002 + GDS\ 102)$	032 049 002 102	284	2	ESS. NO. 2 BUS	INSFD FIG. 30 ZONE 1B, 11A 12A	ARRESTING HOOK CONTROL VALVE (UPLOCK SOLINOID) - ENERGIZED = FIT HYD PRESS-NORMAL AND HOOK CONTROL HANDLE - DOWN AND LEFT OR RIGHT MLG WEIGHT ON WHEELS NOT

1 Table Item #	2 Boolean Equation	3 Transducer List, Cross Reference	4 Solid State Controller List, Cross Reference	5 Bus/Load Management Priority	6 Special Considerations	7 Reference Drawings	8 Equation Description & Notes
285	GKL 285 = GKS 198 • GUS 092	092 198	285	2	ESS. NO. 2 BUS	INSPD FIG. 30 ZONE 14B, 13B 1B	SKID CONTROL BOX - 28VDC = ANTI-SKID/SPOILER BRAKE - BOTH AND MLG HANDLE - DOWN
286	GHL 286 = GHS 199 • GUS 002 • GUS 102	002 102 199	286	2	ESS. NO. 2 BUS	INSPD FIG. 30 ZONE 1C, 5A, 7A, 7A, 9A	ROSEWHEEL STEERING MONITOR (28VDC) = AUTO PILOT ENGAGE ROSEWHEEL STEERING PUSHBUTTON SWITCH-ON AND LEFT AND RIGHT MLG - WEIGHT ON WHEELS
287	GHL 287 = [GKS 193 • (GUS 002 + GUS 102)] • [GKS 194 + GKS 195] • EFS 163 • GUS 072 • GKS 182 • GUS 197 • GUS 201 • GUS 102 • GUS 002 • GUS 197 • GUS 002 • GUS 200 • GUS 002 • GUS 102] (t-1) • GUS 199 (t-1) • [GKS 201 + GKS 200 + GKS 197 + GUS 002 + GUS 102] (t)	002 092 102 163 182 193 194 195 197 199 200 201	287	2	a) ESS. NO. 2 BUS b) *REQUIRES LOCK UP (LATCHING FUNCTION)	INSPD FIG. 30 ZONE 9A, 6A 0B, 7A, 7B, 7C, 0B, 5A, 5B, 1C	ROSE WHEEL STEERING DAMPER UNIT SHUT OFF SOLINOID ENERGIZED (OPEN) = [LAUNCH BAR-EXTENDED AND LEFT OR RIGHT - WEIGHT ON WHEELS MOTOR] (LEFT OR RIGHT THROTTLE - < MIL PWR) AND COMBINED SYS. PRESS - > 450 PSI AND MLG HANDLE-DOWN AND ROSE STRUT-KNEEL ON LEFT AND RIGHT THROTTLE-IDLE AND ROSE-STRUT-STOWED AND LEFT AND RIGHT THROTTLE-ON WHEELS ON LEFT AND RIGHT AND ROSE-STRUT-STOWED AND LEFT AND RIGHT THROTTLE-ON WHEELS ON LEFT AND RIGHT AND ROSE-STRUT- NOT STOWED AND LEFT AND RIGHT MLG ARE OR WERE-WEIGHT ON WHEELS WHEN THE AUTO PILOT ENGAGE ROSEWHEEL STEERING PUSH BUTTON SWITCH WAS-OFF ]
288	GHL 288 = GUS 085	085	288	2	ESS. NO. 2 BUS	INSPD FIG. 30 ZONE 19A, 17A, 1A	NOTE: THIS SSIC TEE'S TO EXISTING CIRCUIT FROM ROSE WHEEL, STEERING MONITOR BOX (59AL) AND IS THERE OR'ED WITH THIS FUNCTION MLG DOWN AND LOCKED FLAG - ENERGIZED = MLG - DOWN AND LOCKED
289	GIL 289	N/A	289	2	ESS. NO. 2 BUS	INSPD FIG. 30 ZONE 17A, 1A	WHEELS-FLAPS POSITION INDICATOR (28VDC PWR) = 28VDC ESS. NO. 2 BUS ENERGIZED
290	GIL 290 = GUS 202	202	290	2	ESS. NO. 2 BUS	INSPD FIG. 30 ZONE 19A, 17A, 1A	MLG UP AND LOCKED FLAG - ENERGIZED = MLG - UP AND LOCKED
291	GIL 291 = GUS 203	203	291	2	ESS. NO. 2 BUS	INSPD FIG. 30 ZONE 20A, 17A 1A	LEFT MLG DOWN AND LOCKED FLAG-ENERGIZED = LEFT MLG - DOWN AND LOCKED



TABLE III P-14 SUSTEL BOOLEAN EQUATIONS

1 Table Item #	2 Boolean Equation	3 Transducer List Cross Reference	4 Solid State Controller List Cross Reference	5 Bus/Load Management Priority	6 Special Considerations	7 Reference Drawings	8 Equation Description & Notes
292	GIL 292 = GJS 204 • GJS 205	204 205	292	2	ESS. NO. 2 BUS	IMSFD FIG. 30 ZONE 20B, 17A 1A	LEFT MLG UP AND LOCKED FLAG - ENERGIZED = LEFT MLG DOOR-UP AND LOCKED AND LEFT MLG POSITION - UP AND LOCKED
293	GIL 293 = GJS 206	206	293	2	ESS. NO. 2 BUS	IMSFD FIG. 30 ZONE 20C, 17A 1A	RIGHT MLG DOWN AND LOCKED FLAG - ENERGIZED = RIGHT MLG - DOWN AND LOCKED
294	GIL 294 = GJS 207 • GJS 208	207 208	294	2	ESS. NO. 2 BUS	IMSFD FIG. 30 ZONE 17A, 20B 1A	RIGHT MLG UP AND LOCKED FLAG - ENERGIZED = RIGHT MLG DOOR - UP AND LOCKED AND RIGHT MLG POSITION - UP AND LOCKED
295	GIL 295 = GCS 211 + EFS 163 + (GJS 182 + GJS 002 + GJS 102 + MAS 180 + GJS 032 + MAS 180 + GJS 031 + (GJS 209 + GJS 210))	002 031 032 102 163 180 182 209 210 211	295	2	ESS. NO. 2 BUS	IMSFD FIG. 30 ZONE 17C, 15A, 13A, 7C, 1B	AUX BRK/SKID ADVISORY - ON = SKID CONTROL - FWR DOWN OR (COMB. SYS. PRESS - > 450 PSI OR (TRANSFER PUMP-ON OR LEFT OR RIGHT MLG - WEIGHT ON WHEELS NOT OR EXTERNAL AC FWR - NOT ON LINE) AND (FLT. HYD. PRESSURE - NOT NORMAL OR EXT. AC. FWR - ON LINE OR COMBINED SYS. PRESSURE - NOT NORMAL)) AND (LEFT OR RIGHT BRAKE PRESS - < 400 PSI) OR SKID CONTROL - FWR LOSS
296	GIL 296 = GJS 002 • GJS 102	002 102	296	2	ESS. NO. 2 BUS	IMSFD FIG. 30 ZONE 15B, 16B	SKID CONTROL BOX - WEIGHT OFF WHEELS INHIBIT = LEFT AND RIGHT MLG - WEIGHT ON WHEELS NOT
297	GIL 297 = MJS 212 + (GJS 049 + GJS 197 + GJS 049 + GJS 051)	049 051 197 212	297	2	ESS. NO. 2 BUS	IMSFD FIG. 30 ZONE 12A, 12B, 17C	HOOK TRANSIT INDICATOR LITE - ON = LIGHT TEST-ACTIVE OR (HOOK CONTROL HANDLE-UP AND HOOK-NOT STOWED) OR (HOOK CONTROL HANDLE-DOWN AND HOOK-NOT DOWN)
298	GIL 298 = MJS 212 + (GJS 052 + GJS 202 + GJS 204 + GJS 205 + GJS 207 + GJS 208) + (GJS 052 + (GJS 065 + GJS 211 + GJS 214 + GJS 201 + GJS 206 + GIL 295))	052 065 202 203 204 205 206 207 208 212 213 214	298 (299)	2	ESS. NO. 2 BUS	IMSFD FIG. 30 ZONE 18B, 17C, 19, 20,	DSL TRANSIT INDICATOR LIGHT (P/O LANDING GEAR HANDLE) ON LIGHT TEST-ACTIVE OR (MLG HANDLE-UP AND (MLG DOOR UNLOCKED OR LEFT MLG DOOR-UNLOCKED OR (MLG DOOR POSITION - UNLOCKED OR RIGHT MLG DOOR - UNLOCKED OR RIGHT MLG POSITION-UNLOCKED)) OR (MLG HANDLE DOWN AND (MLG - UNLOCKED OR LEFT OR RIGHT MLG - RETRACTED OR LEFT OR RIGHT MLG - UNLOCKED OR WHEELS - FLAPS POSITION INDICATOR - UNPOWERED))



TABLE III F-14 SOSTEL BOOLEAN EQUATIONS

1 Table Item #	2 Boolean Equation	3 Transducer List Cross Reference	4 Solid State Controller List Cross Reference	5 Bus/Load Management Priority	6 Special Considerations	7 Reference Drawings	8 Equation Description & Notes
299	$MIL\ 299 = GDS\ 215$ $\bullet (MAS\ 140 + MAS\ 139)$ $\bullet (GDS\ 085 + GDS\ 213)$ $\bullet GDS\ 214 + GDS\ 203$ $+ GDS\ 206 + GIL\ 289$	085 139 140 203 206 213 214 215	299 (289)	2	ESS. NO. 2 BUS	TWSFD FIG. 30 ZONE 17C, 18C, 19A, 20A, 20C,	DOWN AND LOCKED - GND TO THE PILOT CAUTION ADVISORY INDICATOR - FLAP LEVER - $> 10^\circ$ AND (RIGHT OR LEFT THRUSTLE - $< 40^\circ$ ) AND (MIG DOWN - UNLOCKED OR LEFT OR RIGHT MIG - RETRACTED OR LEFT OR RIGHT MIG - UNLOCKED OR WHEELS - FLAPS POSITION INDICATOR - UNPOWERED)

TABLE I. F-14 SUSTEL SIGNAL TRANSDUCERS

1 Table Item #	2 Signal Name/Function	3 Identifier Code	4 Signal Source Box Identification	5 Point of Origin	6 Transducer Type	7 Present Signal Characteristic	8 Associated Loads	9 Conventional Switches Being Replaced or Deleted	10 Operational Address	11 Reference Drawings	12 Associated Boolean Equation	13 Conditioning Technique
124	Air Source - Ram Selected	HNS124	Air Condition Con- trol Panel (42A1)	Pilots Right Side Console STA225	Push Button P/O 5 Manual Operated, Mechanically Interlocked Self-Cancel- ling	Ram Selected = Switched 28VDC Ram Not Selected = Open	a) K25 Ram Air/Timer Relay Box 772A1 b) Shut Off Valve (Enable) c) Over Temp switches 4231 and 4232	Air Source - Ram Push Button Switch	02P28	INSFD Fig. 32 Zone 9A	196 211 198 199	Solid State
125	Ram Air - INCR (Associated with Item 126)	HQS125	Ram Air S2 Switch P/O Air Condition Control Panel (42A1)	Pilots Right side Console STA 225	Toggle Switch (SPDTCC)	INCR = Switched 115VAC Off or DECR = Open	Emergency Ram Air Door Actuator (4212) (Extend)	Ram Air Switch (S2)	02P29	INSFD Fig. 32 Zone 32, 31, 1B	198 199	Solid State
126	Ram Air - DECR (Associated with Item 125)	HQS126	Ram Air Switch S2 P/O Air Condition Control Panel (42A1)	Pilots Right Side Console STA225	Toggle Switch (SPDTCC)	DECR = Switched 115VAC Off or INCR = Open	Emergency Ram Air Door Actuator (4212) (Retract)	Ram Air Switch (S2) #	02P30	INSFD Fig. 32 Zone 32, 31, 1B	199	Solid State
127	GRD CLG-ABC/ CABIN (Associ- ated with Item 128)	HNS127	Test Panel (720A1)	NFO's Right Side Console STA300	Toggle Switch (DPDTCC)	ABC/Cabin = Switched 115VAC Off or ABC/Alm 5A = Open	Ground Cool- ing Diverter Valve Actu- ator (42112) (Retract)	GRD CLG Switch (S3)	04P10	INSFD Fig. 32 Zone 38B	212 200 202 270 736	Solid State
128	GRD CLG-AMG/ ALPS4 (Associ- ated with Item 127)	HNS128	Test Panel (720A1)	NFO's Right Side Console STA300	Toggle Switch (DPDTCC)	AMG/Alps4 = Switched 115VAC Off or ABC/Cabin = Open	Ground Cool- ing Diverter Valve Actu- ator (42112) (Extend)	GRD CLG Switch (S3)	04P11	INSFD Fig. 32 Zone 38B	212 201 203	Solid State
129	>10000 ± 2000 Feet	HCS129	Aneroid Altitude Switch - Aircraft Air Temperature Electronic Control (4248)	Right Side STA 60 Switched W11 30	>30000 Ft = Switched 28VDC <30000 Ft = Open	K11 - Electronic Cooling (Right Glove Relay Box 772A1)		N/A	07R20	INSFD Fig. 32 Zone 33A 27A	205	External Signal Adapter

FIGURE 2 SHEET 2

TABLE I F-14 SPECT SIGNAL TRANSDUCERS

1 Table Item #	2 Signal Name/Function	3 Identifier Code	4 Signal Source Box Identification	5 Point of Origin	6 Transducer Type	7 Present Signal Characteristics	8 Associated Loads	9 Conventional Switches Being Replaced or Deleted	10 Operational Address	11 Reference Drawings	12 Associated Boolean Equation	13 Conditioning Technique
130	<0.4 Mach Signal	WIS130	Air Data Computer (05A1)	Right Side STA400 ML170	Relay Driver Signal From Air Data Computer	<0.4 Mach Signal - GND Not = Open or 28VDC	K13 - Low Mach Pressure No. 1 (Left Glove Relay Box 773A1)	N/A	07D21	WSPD Fig. 32 Zone 11C	210	External Signal Adapter
137	Air Source - Off	HMS137	Air Condition Control Panel (42A1)	Pilots Right Side Console STA225	Push Button P/O 5 Manual Operated Mechanically Interlocked Self Canceling Switches	Off = Switched 28VDC Off Not = Open	Left Bleed Air Shutoff Valve (42L11) Right Bleed Air Shutoff Valve (42R11) K29 Ram Air Timer Dual Pressure Regulator and Shutoff Valve (42L8)	Air Source-Off Push Button Switch	02F31	WSPD Fig. 32 Zone 2B	213 214 212 196 198 199	Solid State
138	Air Source - L. Engine	HMS138	Air Condition Control Panel (42A1)	Pilots Right Side Console STA225	Push Button P/O 5 Manual Operated Mechanically Interlocked Self Canceling Switches	L. Engine = Switched 28VDC L. Engine Not = Open	Right Bleed Air Shutoff Valve (42R11) K14 Bleed Air Relay	Air Source - L. Eng. Push Button Switch	02F32	WSPD Fig. 32 Zone 2B	212	Solid State
139	Left Throttle Start Cross BL - <400	KAS139	Throttle Quadrant (711A1)	Pilots Left Side Console STA225	Limit Switch	<400 = Switched 28VDC >400 = Open	Right Bleed Air Shutoff Valve (42R11)	N/A	05D21	WSPD Fig. 32 Zone 2C	213 212 299	External Signal Adapter
140	Right Throttle Start Cross BL - <400	KAS140	Throttle Quadrant (711A1)	Pilots Left Side Console STA225	Limit Switch	<400 = Switched 28VDC >400 = Open	Right Bleed Air Shutoff Valve (42R11)	N/A	05D22	WSPD Fig. 32 Zone 2B	213 212 299	External Signal Adapter

FIGURE 32 SHEET 3

TABLE 1. F-14 SATEL SIGNAL TRANSDUCERS

1 Table Item #	2 Signal Name/Function	3 Identifier Code	4 Signal Source Box Identification	5 Point of Origin	6 Transducer Type	7 Present Signal Characteristics	8 Associated Loads	9 Conventional Switches Being Replaced or Deleted	10 Operational Address	11 Reference Drawings	12 Associated Boolean Equation	13 Conditioning Technique
141	Left Engine BL Air Valve Switch - Cut Off	KAS141	Throttle Quadrant (711A1)	Pilots Left Side Console STA 225	Limit Switch	Cut Off = Switched 28VDC >Cut Off = Open	Right Bleed Air Shutoff Valve (42111)	N/A	05D23	IMSFD Fig. 32 Zone 2C	212	External Signal Adapter
142	Right Engine BL Air Valve Switch - Cut Off	KAS142	Throttle Quadrant (711A1)	Pilots Left Side Console STA 225	Limit Switch	Cut Off = Switched 28VDC >Cut Off = Open	Right Bleed Air Shutoff Valve (42111)	N/A	05D24	IMSFD Fig. 32 Zone 2B	212	External Signal Adapter
143	Air Source - Right Engine	HMS143	Air Condition Con- trol Panel (42A1)	Pilots Right Side Console STA 225	Push Button P/O 5 Manual Operated, Mechanically Interlocked Self Cancel- ling Switches	R. Eng. = Switched 28VDC R. Eng. Not = Open	Left Bleed Air Shutoff Valve (42111)	Air Source - R. Eng. Push Button Switch	02F33	IMSFD Fig. 32 Zone 2A	213	Solid State
144	Bleed Duct Over - Pres- sure - High	HMS144	Bleed Duct Over Pressure Switch (423A)	Fuelage STA 420	Pressure Switch	High = Switched 28VDC Low = Open	K78 - Bleed Air Shutoff (R. Glove Relay Box 772A1)	Bleed Duct Over Pres- sure Switch (423A)	05P16	IMSFD Fig. 32 Zone 4B	214	Solid State
145	Temp - Auto	HMS145	Air Condition Con- trol Panel (42A1)	Pilot's Right Side Console STA 225	Toggle Switch SPST	Auto = Switched 28VDC Man = Switched 28VDC	Aircraft Air Temp. Elec- tronic Con- trol (42A8) K26 REFRIG 1 (R. Glove Relay Box 772A1)	Temp - Man/Auto Switch	02F34	IMSFD Fig. 32 Zone 9A	215 216	Solid State
146	Over Tempera- ture - 550°F	HMS146	Over Temperature Switch (550°F) (4232)	Fuelage STA 402	Temp. Switch (Snap Action)	>550°F = Switched 28VDC <550°F = Open	Shutoff Valve P/O Bleed Air Flow Modulating Pressure Regulating and Shutoff Valve Assem- bly	Over Temperature Switch (550°F) (4232)	04P12	IMSFD Fig. 32 Zone 13A	211	Solid State



FIGURE 32 SHEET 4

TABLE I F-14 SUSTAIN SIGNAL TRANSDUCERS

1 Table Item #	2 Signal Name/Function	3 Identifier Code	4 Signal Source Box Identification	5 Point of Origin	6 Transducer Type	7 Present Signal Characteristics	8 Associated Loads	9 Conventional Switches Being Replaced or Deleted	10 Operational Address	11 Reference Drawings	12 Associated Boolean Equation	13 Conditioning Technique
147	Over Temperature - 4750F	HNS147	Over Temperature Switch (4750F) (42S1)	Fuselage STA363	Temp. Switch (Snap Action)	>4750F = Switched 28VDC <4750F = Open	Shutoff Valve P/O Bleed Air Flow Modulating Pressure Regulating and Shutoff Valve Assembly	Over Temperature Switch (4750F) (42S1)	04P13	INSFD Fig. 32 Zone 15C	211	Solid State
148	<0.25 Mach Signal	FLS148	Air Data Computer (05A1)	Right Side STA400 ML170	Relay Driver Signal From Air Data Computer	<0.25 Mach = GND >0.25 Mach = Open or 28VDC	K15 - Low Mach Cooling No. 2 (Left Glove Relay Box 773A1)	N/A	07R22	INSFD Fig. 32 Zone 11C	219	External Signal Adapter
149	Cabin Press - Dump	HE3149	Air Condition Control Panel (42A1)	Pilots Right Side Console STA225	Toggle Switch	Dump = Switched 28VDC Norm = Open	Cabin Pressure Safety Valve (42L1) Solenoid	Cabin Press. - Dump/Normal Switch (S3)	02P35	INSFD Fig. 32 Zone 17B	220	Solid State
150	Cabin - Low Pressure	HE3150	Cabin Low Pressure Switch (42S3)	Fuselage STA220	Pressure Switch	Low Pressure (<5 PSI) = Switched 28VDC Low Pressure Not = Open	"Cabin Press" Light - P/O NFO Caution Advisory Indicator (69A2A1)	Cabin Low Pressure Switch (42S3)	02P36	INSFD Fig. 32 Zone 19B	221	Solid State
151	Left Engine Oil - Hot (>250F/260F)	EMS151	Left Engine Oil Temperature Switch (70A4)	Left Engine	Left Engine Oil Temperature Switch (70A4)	Hot (>250F/260F) = Light - P/O Switched 28VDC Not Hot (<250F) (Open) = "Open"	"L. Oil Hot" Light - P/O Pilot Caution Advisory Indicator (66A1)		06P26	INSFD Fig. 32 Zone 1A NAVAIR 03-FLHAAA-2-2-6 Section 006-00 Page 11/12	217	Solid State



TABLE I. F-14 SUBTEL SIGNAL TRANSDUCERS

1 Table Item #	2 Signal Name/Function	3 Identifier Code	4 Signal Source Box Identification	5 Point of Origin	6 Transducer Type	7 Present Signal Characteristics	8 Associated Loads	9 Conventional Switches Being Replaced or Deleted	10 Operational Address	11 Reference Drawings	12 Associated Boolean Equation	13 Conditioning Technique
152	Caution Lamp Drive-On	HNS152	Bleed Air Leak Detector Control Unit (70AD)	Left Side Fuselage STA 350	Relay Con- tacts	Caution Lamp Drive On = Switched 28VDC Off = Open	a) Pilot Caution Advisory Indicator (69AI) "Bleed Duct" Lamp b) Sys. Test and PWR Panel (790AL) "Go" Lamp	N/A	03P10	INSFD Fig. 32 Zone 8A	223	Resistor Divider Adapter
153	Bleed Air - Selected	HQS153	System Test-System PWR Panel (790AL)	NFO Left Knee Panel STA 300	P/O 9 Posi- tion Rotary Switch	Bleed Air - Switched 28VDC Off = Open	Bleed Air Detector Control Unit (70AB) (K2 Relay)	9 Position Rotary Switch (S2)	03P11	INSFD Fig. 32 Zone 7A, 8A	222	Solid State

FIGURE 32 SHEET 1

TABLE II P-11 SOLID STATE POWER CONTROLLERS AND DRIVERS

1 Table Item #	2 Type of Power Controller	3 Rating V & I	4 Associated Loads	5 Duty Cycle	6 Load Power Dissipation	7 P.C. Location	8 Conventional Devices Being Replaced	9 Operational Address	10 Identifier Code	11 Reference Drawings	12 Associated Boolean Equations
195	AC - 1 Pole	V = 115VAC I = 3A	Bleed Air Leak Detector Control Unit (70A8) Power Supply	100%			CB28 (3A) Bleed Duct AC (35A4)	01Q98	HML195	IMSFD Fig. 32 Zone 1A, 8B	195
196	AC - 1 Pole	V = 115VAC I = 3A	Elapsed Time Indi- cator (Part of Booster Turbine Compressor) (42M1)				CB11 (5A) Temp CONTR AC (35A4) P/O K28-Elapsed Time Indicator Shutoff Relay P/O K25-Ram Air/Timer Relay (Right Glove Relay Box 772A1)	0A090	DTL196	IMSFD Fig. 32 Zone 10A, 10B, 9A, 9C, 1A	196
197	AC - 1 Pole	V = 115VAC I = 3A	Aircraft Air Tem- perature Electronic Control (42A8) (P/O Cabin Air Condition- ing Subsystem)	100%			CB36 (5A) ECS Temp CONTR (36A2) CB89 (5A) Air Source CONTR (36A3)	0A091	HML197	IMSFD Fig. 32 Zone 1A, 21A	197
198	AC - 1 Pole	V = 115VAC I = 3A	Emergency Ram Air Door Actuator (42L2) (Extend Leg)				CB11 (5A) Temp CONTR AC (35A4) (See Item 196) CB89 (5A) Air Source CONTR (36A3) (Same as Item 196) P/O K25 Ram Air Timer P/O K28 Elapse Time IND Shutoff (Right Glove Relay Box 772A1)	05Q40	HML199	IMSFD Fig. 32 Zone 1A, 31, 32, 1B	199
199	AC - 1 Pole	V = 115VAC I = 3A	Emergency Ram Air Door Actuator (42L2) (Retract Leg)				Same as Item 198	05Q41	HML199	IMSFD Fig. 32 Zone 1A, 31, 32, 1B	199

TABLE II - 240 SOLID STATE POWER CONTROLLERS AND DRIVERS

1 Table Item #	2 Type of Power Controller	3 Rating V & I	4 Associated Loads	5 Duty Cycle	6 Load Power Dissipation	7 P.C. Location	8 Conventional Devices Being Replaced	9 Operational Address	10 Identifier Code	11 Reference Drawings	12 Associated Boolean Equations
200	AC - 1 Pole	V = 115VAC I = 5A	Ground Cooling Di- verter Valve Actua- tor (42L12) (Re- tract)				CB11 (5A) Temp CONTR AC (35A4) (Same as Item 196)	04Q52	HNL200	1MSFD FIG. 3C Zone 36C, 37B 1A	200
201	AC - 1 Pole	V = 115VAC I = 5A	Ground Cooling Di- verter Valve Actua- tor (42L12) (Extend)				Same as Item 200	04Q53	HNL201	1MSFD FIG. 3C Zone 36C, 37B 1A	201
202	AC - 1 Pole	V = 115VAC I = 5A	Ground Cooling Di- verter Door Actua- tor (42L12) (Re- tract)				CB11 (5A) Temp CONTR AC (35A4) (Same as Item 196)	04Q54	HNL202	1MSFD FIG. 3C Zone 46C, 43A, 1A	202
203	AC - 1 Pole	V = 115VAC I = 5A	Ground Cooling Di- verter Door Actua- tor (42L12) (Extend)				CB11 (5A) Temp CONTR AC (35A4) (Same as Item 196)	04Q55	HNL203	1MSFD FIG. 3C Zone 46C, 43A, 1A	203
204	DC - 1 Pole	V = 28VDC I = 5A	Cooling Effect Controller (44A1)	100%			CB10 (5A) Elec Cooling (36A4)	04Q56	HNL204	1MSFD FIG. 3C Zone 34A, 1C	204
205	DC - 1 Pole	V = 28VDC I = 5A	Equipment Hot Air Modulation Valve (44A5) Solenoid				K11 - Electronic Cooling (Right Glove Relay Box 772A11) CB10 (5A) Elec Cooling (36A4) (Same as Item 204)	04Q57	HNL205	1MSFD FIG. 3C Zone 1C, 33A, 33C	205
206	DC - 1 Pole	V = 28VDC I = 3A	Low Flow Solenoid Valve (27A45) P/O Cabin Air-Cond Subsystem				CB14 (3A) AMT Lock EXCIT (36A4) P/O K30 MUG Safety P (Right Glove Relay Box 772A1)		HNL206	1MSFD FIG. 3C Zone 1C, 37B, 38B, 39A	206

FIGURE 32 SHEET 3

TABLE II P-24 SOLID STATE POWER CONTROLLERS AND DRIVERS

1 Table Item #	2 Type of Power Controller	3 Rating V & I	4 Associated Loads	5 Duty Cycle	6 Load Power Dissipation	7 P.C. Location	8 Conventional Devices Being Replaced	9 Operational Address	10 Identifier Code	11 Reference Drawings	12 Associated Boolean Equations
210	DC - 1 Pole	V = 28VDC	Bleed Air Flow Modulating Pres- sure Regulating and Shutoff Valve (42L10) Shutoff Valve Reset (28VDC)				CB42 (5A) Cabin Press (36A2) P/O K13 Low Mach Pres- sure No. 1 P/O K12 Low Mach Pres- sure No. 2 P/O K2 MIG Safety C (Left Glove Relay Box 772A1) CB26 (5A) ECS Temp CONTR (36A2) Same as Item 196	05Q42	HPL210	INSFD Fig. 32 Zone 1B, 11B, 11C, 14A	210
211	DC - 1 Pole	V = 28VDC	Shutoff Valve Enable (28VDC) Bleed Air Flow Mod- ulating Pressure Regulating and Shutoff Valve (42L10)				P/O K3 - Miscellaneous Start a Relay (R. Glove Relay Box 772A1) CB89 - Air Source CONTR (36A3) (Same as Item 196) P/O K2 MIG Safety F (R. Glove Relay Box 772A1) P/O K16 Misc Start B Relay P/O K9 R. Eng. Start B P/O K10 MIG Safety G (R. Glove Relay Box 772A1) CB23 (5A) Eng. Oil Cool (36A2)	05Q43	HPL211	INSFD Fig. 32 Zone 14A, 10A 5A, 1B INSFD Fig. 40 Zone 5A	211
212	DC - 1 Pole	V = 28VDC	Right Bleed Air Shutoff Valve (42L11)					10Q46	HQL212	INSFD Fig. 32 Zone 6A, 3B 2, 1	212
213	DC - 1 Pole	V = 28VDC	Left Bleed Air Shutoff Valve (42L11)					09Q07	HQL213	INSFD Fig. 32 Zone 6C, 4C 3A 2,	213



TABLE II. 2-14 SOLID STATE POWER CONTROLLERS AND DRIVERS

1 Table Item #	2 Type of Power Controller	3 Rating V & I	4 Associated Loads	5 Duty Cycle	6 Load Power Dissipation	7 P.C. Location	8 Conventional Devices Being Replaced	9 Operational Address	10 Identifier Code	11 Reference Drawings	12 Associated Boolean Equations
214	DC - 1 Pole	V = 28VDC	Dual Pressure Regulator and Shutoff Valve (4218)				P/O K3 Misc Start A P/O K2 MUG Safety F K78 Bleed Air Shutoff (R. Glove Relay Box 772A1)	11Q21	HQL214	1MSFD FIG. 32 Zone 5, 3, 28	214
215	DC - 1 Pole	V = 28VDC	Aircraft Air Temper- ature Electronic Control (4248)				CB26 (5A) ECS Temp. CONTR (364) (Same as item 196)	06D05	HNL215	1MSFD FIG. 32 Zone 11C, 9A, 1B	215
216	DC - 1 Pole (Could Be Enable Driver)	V = 28VDC	a) Aircraft Air Temperature Electronic Con- trol (4248) b) Air Condition Control Panel (42A1) Power Supply Pilots Caution Advisory Indicator "L OIL HOT" Light				CB26 (5A) ECS Temp CONTR (3642) (Same as item 196)	04Q58 07Q20	HNL216	1MSFD FIG. 32 Zone 11C, 9A, 1B Zone 25	216
217	Lamp Driver (Low PWR)	V = 28VDC					CB26(5A) Bleed Air L oil hot (3642)	01DX2	HML217	1MSFD FIG. 32 Zone 1A MAVALR 01- F-104AA-2- 2-6 Section 00600 Page 11/12	217
218	DC - 1 Pole	V = 28VDC	a) Cabin Hot Air Modulating Valve (4213) b) Cabin Air Flow Control Servo Valve (42A6) a) Position Switch b) TORQUE Motor PWR (28VDC) P/O Turbine Dis- charge Hot Air Valve (4214)				P/O K26 HTRHU. 1 Relay CH26(5A) ECS Temp Contr (Same as item 196)	04Q59	HNL218	1MSFD FIG. 32 ZONE 15A, 10A 9A, 1B, 23B 21C, 20C, 30 29, 26, 25	218



TABLE II. P-14 SOLID STATE POWER CONTROLLERS AND DRIVERS

1 Table Item #	2 Type of Power Controller	3 Rating V & I	4 Associated Loads	5 Duty Cycle	6 Load Power Dissipation	7 P.C. Location	8 Conventional Devices Being Replaced	9 Operational Address	10 Identifier Code	11 Reference Drawings	12 Associated Boolean Equations
218 (Continued)			a) Position Switch b) TORQUE Motor PWR (28VDC) P/O Suit Hot Air Modulating Valve (42L5)								
219	DC - 1 Pole	V = 28VDC	a) Shutoff Valve Solenoid P/O Primary Heat Exchanger Fan Modulating and Shutoff Valve (42L7) b) Shutoff Valve Solenoid P/O Secondary Heat Exchanger Turbofan Shutoff Valve (42L6)				CB36 (5A) ECS Temp Contr (36A2) (Same as Item 196) P/O K16 - Low Mach Cooling No. 1 P/O K15 - Low Mach Cooling No. 2 P/O K4 - MUG Safety L (L. Glove Relay Box 773A1)	07Q31 03Q42	HNL219	INSPD Fig. 32 Zone 13, 11C, 1B	219
220	DC - 1 Pole	V = 28VDC	Cabin Pressure Safety Valve (42L1) Solenoid				CB42 (5A) Cabin Press (36A3) (Same as Item 210)	01Q19	RPL220	INSPD Fig. 32 Zone 18B, 17B 1B	220
221	Lamp Driver (Low PWR)	V = 28VDC	MFO Caution Advisory Indicator (69A2A1) "Cabin Press" Light				Same as Item 220	01D01	RPL221	INSPD Fig. 32 Zone 19B, 17C 1B	221
222	Relay Driver	V = 28VDC	Bleed Air Leak Detector Control Unit (70A8)				CB32 GND Test/Mach LVR Bit (36A4) K19 MUG Safety A NGSA (773A1) S1 - Door Open S4 - Test (790A1) P/O S2	0AD36	HNL222	INSPD Fig. 32 Zone 8B	222

TABLE II. F-14 SOLID STATE POWER CONTROLLERS AND DRIVERS

1 Table Item #	2 Type of Power Controller	3 Rating V & I	4 Associated Loads	5 Duty Cycle	6 Load Power Dissipation	7 P.C. Location	8 Conventional Devices Being Replaced	9 Operational Address	10 Identifier Code	11 Reference Drawings	12 Associated Boolean Equations
223	Lamp Driver (Low PWR)	V = 28VDC	a) "Bleed Duct" Lamp P/O Pilot Caution Advisory Indicator (69A1) b) "Go" Lamp P/O System Test and System Power Panel (790A1)				CB9 (5A Bleed Air L. 011 Hot (36A1) (Same as Item 217)	01D03	HML223	INSFD Fig. 32 Zone 7,8	223

TABLE III. P-14 SOSTEL BOOLEAN EQUATIONS

FIGURE 32 SHEET 1

1 Table Item #	2 Boolean Equation	3 Transducer List Cross Reference	4 Solid State Controller List Cross Reference	5 Bus/Load Management Priority	6 Special Considerations	7 Reference Drawings	8 Equation Description & Notes
195	HNL195	N/A	195	2	Eas. No. 2 Bus Zone 1A, 8B	IMSFD Fig. 32	115VAC $\phi$ to the Bleed Air Leak Detector Control Unit (70AB) Power Supply = 115VAC $\phi$ Eas. No. 2 Bus Energized
196	DTL196 = XAS003 + XAS004 • HNS124 + HNS137	003 004 124 137	196	2	Eas. No. 2 Bus	IMSFD Fig. 32 Zone 10A, 10B, 9A, 9C, 1A	115VAC $\phi$ to the Elapsed Time Indicator = Right of Left Main AC Power on Line and Ram-Air Source Not Selected or Air Source-Off-Not Selected
197	HNL197	N/A	197	2	Eas. No. 2 Bus	IMSFD Fig. 32 Zone 1A, 21A	115VAC $\phi$ to the Aircraft Air Temperature Electronic Control = 115VAC $\phi$ No. 2 Bus Energized
198	HQL198 = HNS125 • HNS124 + HNS137	124 125 137	198	2	Eas. No. 2 Bus	IMSFD Fig. 32 Zone 1A, 1B, 31	Emergency Ram Air Door Actuator 115VAC $\phi$ -Extend = Ram Air Switch in the-IMCR-Position and Air Source Ram or Off Selected
199	HQL199 = HNS124 • HNS137 + HNS126 • (HNS124 + HNS137)	124 125 126 137	199	2	Eas. No. 2 Bus	IMSFD Fig. 32 Zone 1A, 1B, 31	Emergency Ram Air Door Actuator 115VAC $\phi$ -Retract = Ram Air Source Not Selected and Air Source Off Not Selected or DBCR Position Selected and Air Source RAM or Off Selected
200	HNL200 = HNS127	127	200	2	Eas. No. 2 Bus	IMSFD Fig. 32 Zone 36C, 37B 1A	Ground Cooling Diverter Valve Actuator 115VAC $\phi$ -Retract = GND Cooling Switch in OBC/Cabin Position
201	HNL201 = HNS128	128	201	2	Eas. No. 2 Bus	IMSFD Fig. 32 Zone 36C, 37B 1A	Ground Cooling Diverter Valve Actuator 115VAC $\phi$ -Extend = GND Cooling Switch in AMG-5/Alm-54 Position
202	HNL202 = HNS127	127	202	2	Eas. No. 2 Bus	IMSFD Fig. 32 Zone 46C, 43A 1A	Ground Cooling Diverter Door Actuator 115VAC $\phi$ -Retract = GND Cooling Switch in OBC/Cabin Position
203	HNL203 = HNS128	128	203	2	Eas. No. 2 Bus	IMSFD Fig. 32 Zone 46C, 43A 1A	Ground Cooling Diverter Door Actuator 115VAC $\phi$ -Extend = GND Cooling Switch in AMG-5/Alm-54 Position
204	HNL204	N/A	204	2	Left Main Bus	IMSFD Fig. 32 Zone 34A, 1C	Cooling Effect Controller 28VDC = 28VDC Left Main Bus Energized
205	HNL205 = HNS129	129	205	2	Left Main Bus	IMSFD Fig. 32 Zone 1C, 33A, 33C	Equipment Hot Air Modulating Valve Solenoid Energized (28VDC) = Altitude > 30000 $\pm$ 2000 Ft.

TABLE III P-14 SUSTAIN BOOLEAN EQUATIONS

1 Table Item #	2 Boolean Equation	3 Transducer List Cross Reference	4 Solid State Controller List Cross Reference	5 Bus/Load Management Priority	6 Special Considerations	7 Reference Drawings	8 Equation Description & Notes
206	HNS206 = GDS002 • GDS102 • (HNS127 • HNS128)	002 102 127 128	206	3	L. Main Bus	IMSFD Fig. 32 Zone 1C, 37B, 38B, 39A	Low-Flow Solenoid Valve Energized (28VDC) = Left and Right MG Weight-On-Wheels and GND CIG Switch on GBC/Cabin or AMG-9/Alm-54
210	HPL210 = FES130 • GDS002 • GDS102	002 102 130	210	2	Ess. No. 2 Bus	IMSFD Fig. 32 Zone 1B, 11B, 11C, 14A	Bleed Air Flow Modulating Pressure Regulating and Shutoff Valve - Shutoff Valve Solenoid Reset (28VDC) - <0.4 Mach Signal Not (Low Mach Pressure Not) and Left or Right MG Weight on Wheels Not
211	HPL211 = HNS124 • [(KKS131 • KKS133 • KKS135) • (KKS132 • KKS134 • KKS136)]  (GDS002 • GDS102) • (KKS131 • KKS133 • KKS135) • (KKS132 • KKS134 • KKS136)  (HNS146 • HNS147)	002 102 124 131 132 133 134 135 136 146 147	211	2	Ess. No. 2 Bus	IMSFD Fig. 32 Zone 1A, 10A 9A, 1B IMSFD Fig. 40 Zone 3A	Bleed Air Flow Modulating Pressure Regulating and Shutoff Valve - Shutoff Valve Solenoid Enable (28VDC) - Air Source-Run-Selected and Left Engine Crank Not Selected or L. Engine auto restart switch open or L. Engine cutoff switch-open and right engine crank not selected or R. engine auto restart switch open or R. Engine cutoff switch open or Left or Right MG Weight on Wheel Not and L. Engine Engine-Crank and L. Engine Auto Restart Switch-Closed and L. Engine Cutoff Switch-Closed or Right Engine- Crank and R. Engine Auto Restart Switch-Closed and R. Engine Cutoff Switch-Closed or Overtemperature Switch 550°F Closed or Overtemperature Switch 475°F Closed
212	HNS122 = KKS132 • KKS136  (HNS148 • HNS147) • KKS131 • KKS133 • KKS135 • KKS132 • KKS134 • KKS136  GDS002 • GDS102 • KKS140 • KKS139 • KKS131 • KKS133 • KKS135 • KKS132 • KKS134 • KKS136	002 102 131 132 133 134 135 136 137 138 139 140 141 142	212	2	Ess. No. 2 Bus	IMSFD Fig. 32 Zone 6A, 3, 2	Right Bleed Shutoff Valve Energized - Closed - Right Engine-Crank and Right Engine Cutoff Switch-Closed or (Air Source - L. Engin or Off) and [Left Engine-Crank Not or Auto Restart Switch Closed or Cutoff Switch- Closed and Right Engine-Crank Not or Auto Restart Switch-Closed or Cutoff Switch-Closed] or Left and Right MG Weight on Wheels and R. Throttle Start Cross BL-clop and R. Throttle Start Cross BL - clop and [Left Engine-Crank and Auto Restart Switch- closed and Cutoff Switch-Closed or Right Engine-Crank closed and Auto Restart Switch-Closed and Cutoff Switch-Closed or



TABLE III P-14 SCOTEL BOOLEAN EQUATIONS

FIGURE 32 SHEET 3

1	2	3	4	5	6	7	8
Table Item #	Boolean Equation	Transducer List Cross Reference	Solid State Controller List Cross Reference	Bus/Load Management Priority	Special Considerations	Reference Drawings	Equation Description & Notes
212 (Continued)							
213	$HQL213 =$ $KXS131 \bullet KXS135$ $+$ $(HNS143 \bullet HNS137) \bullet$ $KXS131 \bullet KXS133 \bullet$ $KXS135 \bullet KXS132 \bullet$ $KXS134 \bullet KXS136$ $+$ $GUS002 \bullet GUS102 \bullet$ $KAS139 \bullet KAS140 \bullet$ $[KXS131 \bullet KXS133$ $\bullet KXS135 \bullet KXS132$ $\bullet KXS134 \bullet KXS136]$ $+$ $KAS141 \bullet KAS142 \bullet$ $GUS002 \bullet GUS102$	002 102 131 132 133 134 135 136 137 139 140 143 141 142	213	2	INSFD Fig. 32 Zone 6C, 3, 2	Left and Right Engine BL Air Valve Switch- <u>Out</u> off and Left and Right <u>MLG</u> Weight On Wheels  Left Bleed Air Shutoff Valve Energized (Closed) = Left Engine-Crank and <u>Out</u> off Switch-Closed or Air Source-R. Eng. or Off and (Left Engine-Crank Not or Auto Restart Switch-Open or <u>Out</u> off Switch-Open and Right Engine-Crank Not or Auto Restart Switch-Open or <u>Out</u> off Switch-Open] or Left and Right <u>MLG</u> Weight on Wheels and Left and Right Throttle Start Cross BL Switch's <200° and (Left Engine- Crank and Auto Restart Switch Closed and <u>Out</u> off Switch Closed or Right Engine-Crank and Auto Restart Switch Closed and <u>Out</u> off Switch Closed] or Left and Right Engine BL Air Valve Switch- <u>Out</u> off and Left and Right <u>MLG</u> Weight on Wheels  Dual Pressure Regulator Shutoff Valve <u>PMR</u> (Closed) = Air Source - Off and (Left Engine-Crank Not or Auto Restart Switch-Open or <u>Out</u> off Switch-Open and Night Engine-Crank Not or Auto Restart Switch-Open or <u>Out</u> off Switch-Open] or (Left or Right <u>MLG</u> Weight on Wheels Not) and (Left Engine-Crank and Auto Restart Switch-Closed and <u>Out</u> off Switch-Closed or Right Engine-Crank and Auto Restart Switch-Closed and <u>Out</u> off Switch-Closed] or Bleed Duct Overpressure Switch-High* 28VDC Control <u>PMR</u> to the Aircraft Air Temperature Electronic Control = Temp. Switch-Auto	
214	$HQL214 = HNS137 \bullet$ $KXS131 \bullet KXS133 \bullet$ $KXS135 \bullet KXS132 \bullet$ $KXS134 \bullet KXS136$ $+$ $(GUS002 \bullet GUS102) \bullet$ $[KXS131 \bullet KXS133$ $\bullet KXS135 \bullet KXS132$ $\bullet KXS134 \bullet KXS136]$ $+$ $HGS144$	002 102 131 132 133 134 135 136 137 139 140 143 141 144	214	2	a) Ess. No. 2 Bus b) Requires Latch- Up, Once Bleed Duct Over Pres- sure Switch is in the High Position the Dual Pressure Regulator Shut- off Valve Re- mains Closed Until Power is Removed  Ess. No. 2 Bus	INSFD Fig. 32 Zone 5, 3	Left and Right Engine BL Air Valve Switch- <u>Out</u> off and Left and Right <u>MLG</u> Weight on Wheels  Dual Pressure Regulator Shutoff Valve <u>PMR</u> (Closed) = Air Source - Off and (Left Engine-Crank Not or Auto Restart Switch-Open or <u>Out</u> off Switch-Open and Night Engine-Crank Not or Auto Restart Switch-Open or <u>Out</u> off Switch-Open] or (Left or Right <u>MLG</u> Weight on Wheels Not) and (Left Engine-Crank and Auto Restart Switch-Closed and <u>Out</u> off Switch-Closed or Right Engine-Crank and Auto Restart Switch-Closed and <u>Out</u> off Switch-Closed] or Bleed Duct Overpressure Switch-High* 28VDC Control <u>PMR</u> to the Aircraft Air Temperature Electronic Control = Temp. Switch-Auto
215	$HQL215 = HNS145$	145	215	2	Ess. No. 2 Bus	INSFD Fig. 32 Zone 11C, 9A, 1B	Left and Right Engine BL Air Valve Switch- <u>Out</u> off and Left and Right <u>MLG</u> Weight on Wheels  Dual Pressure Regulator Shutoff Valve <u>PMR</u> (Closed) = Air Source - Off and (Left Engine-Crank Not or Auto Restart Switch-Open or <u>Out</u> off Switch-Open and Night Engine-Crank Not or Auto Restart Switch-Open or <u>Out</u> off Switch-Open] or (Left or Right <u>MLG</u> Weight on Wheels Not) and (Left Engine-Crank and Auto Restart Switch-Closed and <u>Out</u> off Switch-Closed or Right Engine-Crank and Auto Restart Switch-Closed and <u>Out</u> off Switch-Closed] or Bleed Duct Overpressure Switch-High* 28VDC Control <u>PMR</u> to the Aircraft Air Temperature Electronic Control = Temp. Switch-Auto



TABLE III P-14 SUSTEL BOOLEAN EQUATIONS

FIGURE 32 SHEET 1

1 Table Item #	2 Boolean Equation	3 Transducer List Cross Reference	4 Solid State Controller List Cross Reference	5 Bus/Load Management Priority	6 Special Considerations	7 Reference Drawings	8 Equation Description & Notes
216	HNL216 = HNS145	145	215	2	Ess. No. 2 Bus	INSFD Fig. 32 Zone 11C, 9A, 1B Zone 25	28VDC Control PWR to the Aircraft Air Temperature Electronic Control and Air Condition Control Panel Power Supply = Temp Switch - Man
218	HNL218	NA	218	2	Ess. No. 2 Bus	INSFD Fig. 32 Zone 15A, 10A 9B, 1B, 23B, 21C, 20C, 30, 29, 26, 25	28VDC to the Turbine Discharge Hot Air Valve a) Torque Motor and b) Position Switch and the Suit Hot Air Modulating Valve
219	HNL219 = FLS148 + QDS002 • QDS102	002 102 148	219	2	Ess. No. 2 Bus	INSFD Fig. 32 Zone 13, 11C, 1B	a) Torque Motor and b) Position Switch and the Cabin Hot Air Modulating Valve and the Cabin Air Flow Control Servo Valve
220	HPL220 = HPS149	149	220	2	Ess. No. 2 Bus	INSFD Fig. 32 Zone 18B, 17B, 1B	28VDC to the a) Primary Heat Exchanger Fan Modulating and Shutoff Valve - Shutoff Valve Solenoid (Close) b) Secondary Heat Exchanger Turbofan Shutoff Valve (Close) = <0.25 Mach Signal of Left and Right M/G Weight on Wheels
221	HPL221 = HPS150	150	221	2	Ess. No. 2 Bus	INSFD Fig. 32 Zone 19B, 17C 1B	Cabin Pressure Safety Valve - Energized (28VDC) (Dump) = Air Condition Cabin Press Switch-Dump
217	HNL217 = HNS151	151	217	2	Ess. No. 2 Bus	INSFD Fig. 32 Zone 1A NAVALR 01-P14- AAA-2-2-6 Section 00600 Page 11/12	"Cabin Press" Caution Light On = Cabin-Low Pressure
222	HNL222 = WAS054 • MJS056 • HNS153	054 056 153	222	3	L. Main Bus	INSFD Fig. 32 Zone 8, 9	Pilot's Caution Advisory Indicator Panel "L Oil Hot" Illuminated = Left Engine Oil Temperature Switch Closed (Hot, >509°)
223	HNL223 = HNS152	152	223	3		INSFD Fig. 32 Zone 8, 9	Bleed Air Leak Detector Control Unit K2 Relay Energized = Door-Open and Test Button Depressed and Bleed Air Selected "Up" and "Bleed Bact" Lamp Illuminated = Caution Lamp Drive

AD-A047 860

## ADVANCED AIRCRAFT ELECTRICAL SYSTEM (AAES) DEFINITION

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The image displays a 5x15 grid of 75 small, dark, rectangular objects, likely film strips or microfilm frames. Each object shows faint, illegible markings or patterns, possibly representing data or text. The objects are arranged in 5 rows and 15 columns.



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FIGURE 33 SHEET 1

TABLE 1. P-1A SUBTEL SIGNAL TRANSDUCERS

1 Table Item #	2 Signal Name/Function	3 Identifier Code	4 Signal Source Box Identification	5 Point of Origin	6 Transducer Type	7 Present Signal Characteristics	8 Associated Loads	9 Conventional Switches Being Replaced or Deleted	10 Operational Address	11 Reference Drawings	12 Associated Boolean Equation	13 Conditioning Technique
094	Gyro/MSHLD Rtr - ON	HUS094	System test and system power panel (790A1)	HPO's left knee panel PS100	Toggle Switch SHPT	ON = Switched 115 VAC 60 OFF = Open	Windshield power con- trol (40A1)	Gyro/MSHLD RT - ON/OFF Switch	03P12	INSPD Fig. 33 Zone 4B	168	Solid state
095	Windshield Defog-Max	HUS095	Windshield Defog Panel (40A3)	Pilot's right side con- sole PS225	Toggle Switch DPTT	Max = Switched 28 VDC Min = Open	High Defog Solenoid (40A4)	Wind Defog - Max/ Norm/Min Switch S1	02P37	INSPD Fig. 33 Zone 6A	169 170	Solid state
096	Windshield Defog - Norm	HUS096	Windshield Defog Panel (40A3)	Pilot's Right Side Con- sole PS225	Toggle Switch DPTT	Norm = Switched 28 VDC Min = Open	Medium de- fog solen- oid (40L3)	Wind Defog - Max/ Norm/Min Switch S1	02P36	INSPD Fig. 33 Zone 6A	170	Solid state
097	Wind Over- heat sensor- hot	HUS097	Windshield Over- heat Sensor (40G1)	Pilot's wind leading edge anti-ice nozzle PS205 ML170	Temperature Sensor	Hot (300° ± 10°) P = closed (switched 28VDC) Cold (260° ± 10°P) = Open	a) K3 Wind hot relay (forward switching assembly 701A2) b) Pilot caution advisory indicator (09A1)	Windshield overheat sensor (40G1)	01P36	INSPD Fig. 33 Zone 5A	171 173	Solid state
098	* Main repel - ON	HUS098	External environ- ment control panel (792A1)	Pilot's Right side con- sole PS225	Main repel/ Toggle Switch (dptt)	ON = switched 28 VDC	a) Main re- pellent timer (40G) b) Windshield anti-ice pressure regulator and shutoff valve	Windshield - Main Repel/air/off Switch (S1)	02P39	INSPD Fig. 33 Zone 4A	171 172	Solid state * Main repel - Requires logic holding to insure correct sampling

TABLE 1. F-14 SUBTEL SIGNAL TRANSDUCERS

1 Table Item #	2 Signal Name/Function	3 Identifier Code	4 Signal Source Box Identification	5 Point of Origin	6 Transducer Type	7 Present Signal Characteristics	8 Associated Loads	9 Conventional Switches Being Replaced or Deleted	10 Operational Address	11 Reference Drawings	12 Associated Boolean Equation	13 Conditioning Technique
099	Air - ON	H43099	External environ- ment control panel (792A1)	Pilot's Right Side Con- sole PS225	Momentary/ Toggle Switch (DPDT)	ON - switched 28 VDC	Windshield anti-ice pressure regulator and shutoff valve	Windshield - Main Repel/Air/Off switch (S1)	Q3140	146PD Fig. 33 Zone 1A	171	Solid state
100	Alarm light Output - ON	LTS100	Windshield Power Control (40A1)	PS210	Discrete Signal	28 VDC of open	Pilots - Warning Not - Caution Ad- visory indi- cator (69A1)	-	Q3145	146PD Fig. 33 Zone 5C	173	External Signal Adapter



TABLE II E-14 SOLID STATE POWER CONTROLLERS AND DRIVERS

1 Table Item #	2 Type of Power Controller	3 Rating V & I	4 Associated Loads	5 Duty Cycle	6 Load Power Dissipation	7 P.C. Location	8 Conventional Devices Being Replaced	9 Operational Address	10 Identifier Code	11 Reference Drawings	12 Associated Boolean Equations
168	AC-1 Pole	V=115 VAC I=7.5A	Windshield Power Control (40A1)				CB1(7.5A) Wield Defog per (35A1)	04Q13	NULL68	INSPD Fig. 33 Zone 3B, 4A, 5C	168
169	DC-1 Pole	V = 28 VDC	High Defog Solen- oid (40A4)				CB4(5A) Wield Defog Contr (35A4)	04Q60	NULL69	INSPD Fig. 33 Zone 6B, 6A, 3A	169
170	DC-1 Pole	V = 28 VDC	Medium Defog Solen- oid (40L3)				CB4(5A) Wield Defog Contr (35A4)	04Q61	NULL70	INSPD Fig. 33 Zone 6B, 6A, 3A	170
171	DC-1 Pole	V = 28 VDC	Windshield anti-ice Pressure Regulator and Shutoff Valve (40L1)				Forward Switching Assembly K3 Windshield Hot Relay (781A1) CB 31 (5A) Main Impl/Anti-ice Contr/RR Contr (35A2) (Same as Item 107, 108, 109)	04Q62	NULL71	INSPD Fig. 33 Zone 7, 5B, 4A, 3A	171
172	DC-1 Pole	V = 28 VDC	Main Repellent Shutoff Valve (40L2)				Main Repellent Timer (40L1)	04Q14	NULL72	INSPD Fig. 33 Zone 7B, 7A, 4A, 3A	172
173	Lamp Driver	V = 28 VDC	Wield Hot - Pilot Caution Advisory Indicator Panel (69A1)				K3 Relay-Forward Switching Assembly (781A1) See Item 171	01D04	LTL173	INSPD Fig. 33 Zone 6B, 5B, 5C	173
174	DC-1 Pole	V = 28 VDC	Windshield Power Control (40A1)				CB4(5A) Wield Defog Contr (35A4) Same as Item 169	04Q15	NULL74	INSPD Fig. 33 Zone 3A, 5C	174

TABLE III F-14 SUBTEL ROLEAN EQUATIONS

1	2	3	4	5	6	7	8
Line #	Boolean Equation	Transducer List Cross Reference	Solid State Controller List Cross Reference	Bus/Load Management Priority	Special Considerations	Reference Drawings	Equation Description & Notes
168	RUL168 = RUS094	094	168	3	R, Main Bus	INSPD Fig. 33 Zone 3B, 4B, 5C	115 VAC 6A to the windshield power control - ON Gyros/Wahld Heater Switch - ON
169	RUL169 = RUS095	095	169	3	R, Main Bus	INSPD Fig. 33 Zone 5B, 6A, 3A	High Defog Solenoid energized (28 VDC) = Windshield Defog Panel Switch - MAX
170	RUL170 = RUS096 + RUS095	095 096	170	3	R, Main Bus	INSPD Fig. 33 Zone 5B, 6A, 3A	Medium Defog Solenoid energized (28 VDC) = Windshield Defog Panel Switch - MAX OR Normal
171	RUL171 = RUS097 + (RUS099 + RUS098)	097 098 099	171	2	Eas. No. 2 Bus	INSPD Fig. 33 Zone 7B, 5B 4A, 3A	Windshield anti-ice pressure regulator and shutoff valve energized (windshield anti-ice air - on) = Windshield Overheat Sensor - Open AND external environment control panel switch in rain repel air position
172	RUL172 = RUS098	098	172	2	a) Eas. No. 2 Bus b) Requires 0.7 Sec Timer (on for 0.7 sec after momen- tary RUS098 is actuated)	INSPD Fig. 33 Zone	Main repellent Shutoff valve is energized (rain repel- lent spray on for 0.7 seconds) = rain repel auxiliary switch actuated
173	LTL173 = LTS100 + RAS097	097 100	173	3	R, Main Bus	INSPD Fig. 33 Zone 6B, 5B 5A, 3A	Wahld hot - Caution Advisory Lite - ON = Windshield power control alarm light output - ON OR windshield overheat sensor - Closed
174	RUL174	NA	174	3	R, Main Bus	INSPD Fig. 33 Zone 3A, 5C	28 VDC to the windshield power control = 28 VDC right main bus energized

FIGURE 34 SHEET 1

TABLE I. F-14 SATEL SIGNAL TRANSDUCERS

1 Table Item #	2 Signal Name/Function	3 Identifier Code	4 Signal Source Box Identification	5 Point of Origin	6 Transducer Type	7 Present Signal Characteristics	8 Associated Loads	9 Conventional Switches Being Replaced or Deleted	10 Operational Address	11 Reference Drawings	12 Associated Boolean Equation	13 Conditioning Technique
101	LIQ COOLING AWG-9/ ADM-54 - ON	HNS 101	LIQUID COOLING CONTROL PANEL (61A1)	WFO'S LEFT SIDE CONSOLE FS 300	TOGGLE SWITCH (4, PDTCO)	SWITCHED VOLTAGES	a) MCS/MISSILE CONTROLLER (61A2) b) K34-AWG-9 PUMP K35-ADM-54 PUMP (RIGHT GLOVE RELAY BOX 772A1) c) K51 ADM-54A HEATER FWR (LEFT GLOVE RELAY BOX 773A1)	LIQ COOLING - AWG-9/ADM-54 SWITCH	03P13	IMSFD FIG. 34 ZONE 2A	175 176 177 178	SOLID STATE
103	LIQ COOLING AWG-9 - ON	HNS 103	LIQUID COOLING CONTROL PANEL (61A1)	WFO'S LEFT SIDE CONSOLE FS 300	TOGGLE SWITCH (4PDTCO)	SWITCHED VOLTAGES	SAME AS ITEM 101	LIQ COOLING AWG-9/ADM-54 SWITCH	03P14	IMSFD FIG. 34 ZONE 2A	175 176 179	SOLID STATE
104	PAIRING INTERLOCK SWITCH-CLOSED	AGS 104	PAIRING INTERLOCK SWITCH (61B3)	LEFT SIDE FS 375	LIMIT SWITCH	SWITCHED CLOSED- 20VDC OPEN - OPEN	K35 ADM-54 PUMP (RIGHT GLOVE RELAY BOX 772A1) K51 ADM-54A HEATER FOWER (LEFT GLOVE RELAY BOX 773A1)	PAIRING INTERLOCK SWITCH (61B3)	05P17	IMSFD FIG. 34 ZONE 3C	177	SOLID STATE

TABLE II. F-14 SOLID STATE POWER CONTROLLERS AND DRIVERS

1 Table Item #	2 Type of Power Controller	3 Rating V & I	4 Associated Loads	5 Duty Cycle	6 Load Power Dissipation	7 P.C. Location	8 Conventional Devices Being Replaced	9 Operational Address	10 Identifier Code	11 Reference Drawings	12 Associated Boolean Equations
175	AC-3 POLE	115VAC φ A, B & C I = 15A COOL	WCS COOLANT PUMP (61B2)				CB35 (15A) AIM-54-9 PUMP PH A (35A1) CB35 (15A) AIM-54-9 PUMP PH B (35A1) CB35 (15A) AIM-54-9 PUMP PH C (35A1) K35 AIM-54-9 PUMP RIGHT GLOVE RELAY BOX (772A1) CBM2 (5A) LIQUID COOLING CONTR DC (36A4)	0944 0945 0946	HEL 175	INSFD FIG. 34 ZONE 2A, 1B 2B, 4B	175
176	AC-1 POLE	115VAC φ I-5A	WCS/MISSILE CONTROLLER (61A2)				CB11 (5A) LIQUID COOLING CONTR AC (35A1)	0947	HEL 176	INSFD FIG. 34 ZONE 1B, 2A 7B	176
177	AC-3 POLE	115VAC φ A, B & C I = 15A COOL	MISSILE COOLANT PUMP ASSEMBLY (61B1)				CBM0 (15A) STA 3/6 AIM-7/ AIM-54 PUMP CB35 (15A) STA 3/6 AIM-7/ AIM-54 PUMP PH B (35A5) CB35 (15A) STA 3/6 AIM-7/ AIM-54 PUMP PH C (35A5) K35 AIM-54 PUMP RIGHT GLOVE RELAY BOX (772A1)	07032 07033 07034	HEL 177	INSFD FIG. 34 ZONE 1C, 2C, 3C, 2A	177
178	DC-1 POLE	V-28VDC	WCS/MISSILE CONTROLLER (61A2)				CBM2 (5A) LIQUID COOLING CONTR DC (36A4) (SAME AS ITEM 175)	0948	HEL 178	INSFD FIG. 34 ZONE 1A, 2A 5B	
179	DC-1 POLE	V-28VDC	WCS/MISSILE CONTROLLER (61A2)				CBM2 (5A) LIQUID COOLING CONTR DC (36A4) (SAME AS 175)	0949	HEL 179	INSFD FIG. 34 ZONE 1A, 2A, 5C	179

TABLE III F-14 SUSTAINMENT EQUATIONS

1 Table Item #	2 Boolean Equation	3 Transducer List Cross Reference	4 Solid State Controller List Cross Reference	5 Bus/Load Management Priority	6 Special Considerations	7 Reference Drawings	8 Equation Description & Notes
175	HNL 175 = HNS 101 + HNS 103	101 103	175	3	R. MAIN BUS	INSFD FIG. 34 ZONE 1B, 2A, 2B, 4B	115 VAC $\phi$ A, B & C TO THE WCB COOLANT PUMP = LIQ COOLING SWITCH AT (AMG-9/AIM-54 OR AMG-9)
176	HNL 176 = HNS 101 + HNS 103	101 103	176	3	R. MAIN BUS	INSFD FIG. 34 ZONE	115 VAC $\phi$ C TO THE WCB/MISSILE CONTROLLER = LIQ COOLING SWITCH AT (AMG-9/AIM-54 OR AMG-9)
177	HNL 177 = HNS 101 + AGS 104	101 104	177	3	R. MAIN BUS	INSFD FIG. 34 ZONE 1C, 2A, 2C, 3C	115 VAC $\phi$ A, B & C TO THE MISSILE COOLANT PUMP = LIQ COOLING SWITCH AT AMG-9/AIM-54 AND FAILING INTERLOCK LIMIT SWITCH-CLOSED
178	HNL 178 = HNS 101	101	178	3	R. MAIN BUS	INSFD FIG. 34 ZONE 1A, 2A, 5B	28VDC TO THE WCB/MISSILE CONTROLLER = LIQ COOLING SWITCH AMG-9/AIM-54
179	HNL 179 = HNS 103	103	179	3	R. MAIN BUS	INSFD FIG. 34 ZONE 1A, 2A, 5C	28VDC TO THE WCB/MISSILE CONTROLLER = LIQ COOLING SWITCH AT AMG-9



TABLE 1 P-14 BOOST SIGNAL TRANSDUCERS

FIGURE 35 SHEET 1

1 Table Item #	2 Signal Name/Function	3 Identifier Code	4 Signal Source Box Identification	5 Point of Origin	6 Transducer Type	7 Present Signal Characteristics	8 Associated Loads	9 Conventional Switches Being Replaced or Deleted	10 Operational Address	11 Reference Drawings	12 Associated Boolean Equation	13 Conditioning Technique
163	COMBINED SYS. PRESSURE - > 450 P.S.I.	EPS 163	COMBINED SYS. PRESSURE MODULE (47A2)	LEFT SIDE FS 645	PRESSURE SWITCH	> 450 PSI = SWITCHED 28VDC < 450 PSI = SWITCHED 28VDC	K88 - MOSE KREEL RELAY L. GLOVE RELAY BOX (773A1)	COMBINED SYS. PRESSURE SWITCH	0627	INSPD FIG. 35 ZONE 2A	237, 281 242, 287 244, 295 262 263 277 243 500 279 280	SOLID STATE
180	EXTERNAL AC POWER - ON LINE	XAS 180	P/O AC EXTERNAL POWER CONTACTOR (66A6K3)	LEFT SIDE FS 110	AC CONTACTOR	N/A	N/A	N/A	0526	INSPD FIG. 35 ZONE 3B	262 735 263 265 266 267 268 270 279 295	EXTERNAL SIGNAL ADAPTER
181	FLT. SYS. PRESS-450PSI	EPS 181	P/O FLIGHT SYSTEM PRESSURE MODULE (47A1)	RIGHT SIDE FS 160	PRESSURE SWITCH	> 450 PSI - SWITCHED 28VDC < 450 PSI = SWITCHED 28VDC	ISOLATION 10 SEC TIME DELAY RELAY (LEFT GLOVE RELAY BOX (773A1)	FLIGHT SYSTEM PRESSURE SWITCH	041A	INSPD FIG. 35 ZONE 2A	262 263	SOLID STATE
182	TRANSFER PUMP- ON	QGS 182	SYSTEM TEST AND SYSTEM POWER PANEL (790A1)	RTO'S LEFT KNEE PANEL FS 300	TOGGLE SWITCH (SEPT)	ON - SWITCHED 28 VDC OFF - SWITCHED 28 VDC	X88-TRANSFER PUMP SHUTOFF RELAY (L. GLOVE RELAY BOX (773A1)	TRANSFER PUMP ON/OFF SWITCH	0315	INSPD FIG. 35 ZONE 3B	262 263 265 295	SOLID STATE
183	RTD TRANSFER PUMP - NORMAL	QGS 183	HYDRAULIC TRANSFER PUMP PANEL (47A3)	PILOT'S RIGHT SIDE CONSOLE FS 225	TOGGLE SWITCH (SEPT)	NORMAL - SWITCHED 28VDC OFF - SWITCHED 28VDC	COMBINED TRANSFER PUMP SHUTOFF VALVE P/O COMBINED SYSTEM PRESSURE MODULE (47A2)	AUX RTD CONT- ON/OFF SWITCH	0241	INSPD FIG. 35 ZONE 19A, 23B, 24, 25, 38, 48 39, 1A	262 263	SOLID STATE

FIGURE 35 SHEET 2

TABLE I. F-14 SUSTAINMENT SIGNAL TRANSDUCERS

1 Table Item #	2 Signal Name/Function	3 Identifier Code	4 Signal Source Box Identification	5 Point of Origin	6 Transducer Type	7 Present Signal Characteristics	8 Associated Loads	9 Conventional Switches Being Replaced or Deleted	10 Operational Address	11 Reference Drawings	12 Associated Boolean Equation	13 Conditioning Technique
184	BACKUP MODULE TEMP SWITCH - CLOSED ( $<180^{\circ}\text{F}$ )	QCS184	FLIGHT CONTROL BACKUP MODULE (6382)	FS710	TEMPERATURE SWITCH	HOT ( $<180^{\circ}\text{F}$ ) = OPEN COOL = CLOSED	AUX HYD CONT SWITCH- SOLINOID P/O SYS. TEST AND SYS. RUN PANEL (790A1)	N/A	03P28	ENGFD FIG. 35 ZONE 25B	266 267	RESISTOR DIVIDER ADAPTER
185	AUX HYD CONT ON	QCS185	STS. TEST AND SYS. PWR PANEL (790A1)	NFO'S LEFT KNEE PANE FS 300	SPRING LOADED SOLINOID/ MANUAL TOGGLE SWITCH	ON = SWITCHED 28VDC OFF = OPEN	a) BACK UP MODULE GROUND SOLINOID VALVE b) HIGH SPEED RELAY P/O FLT CONTROL BACKUP MODULE (6382) c) M65-EMERG FLT HYD IND RELAY (L-GLOVE RELAY BOX 773A1)	AUX HYD CONT- ON/OFF SWITCH	03P16	ENGFD FIG. 35 ZONE 5B	266 267	SOLID STATE
186	EMERG FLT HYD- HI	QCS186	MASTER TEST PANEL (734A1)	PILOT'S RIGHT SIDE CONSOLE FS 225	TOGGLE SWITCH	HI-SWITCHED 28VDC LOW-SWITCHED 28VDC	FLT CONTROL BACKUP MODULE (6382) ELECTRIC MOTOR HI SPEED AND LOW SPEED RELAYS	EMERG FLT HYD-HIGH/ LOW/AUTO (LOW) SWITCH	03P42	ENGFD FIG. 35 ZONE 7C	267 268	SOLID STATE
187	BACKUP MODULE PRESSURE - CLOSED ( $>500\text{ PSI}$ )	QCS187	FLT. CONTROL BACKUP MODULE (6382)	FS 710	PRESSURE SWITCH	CLOSED ( $>500\text{PSI}$ ) = GND OPEN ( $<350\text{PSI}$ ) = OPEN	EMERG FLT HI AND LOW FLIGHT P/O HYDRAULIC PRESSURE INDICATOR (374A1)	N/A	03P29	ENGFD FIG. 35 ZONE 26C, 28C	275 276	RESISTOR DIVIDER ADAPTER

TABLE II. P-14 SOLID STATE POWER CONTROLLERS AND DRIVERS

1 Table Item #	2 Type of Power Controller	3 Rating V & I	4 Associated Loads	5 Duty Cycle	6 Load Power Dissipation	7 P.C. Location	8 Conventional Devices Being Replaced	9 Operational Address	10 Identifier Code	11 Reference Drawings	12 Associated Boolean Equations
262	DC-1 POLE	V-28VDC	COMBINED TRANSFER PUMP SHUTOFF VALVE P/O COMBINED SYSTEM PRESSURE MODULE (47A2)				CB19(5A) HYD VALVE CONTR (36A2) CB40(715A) EMERG. FLT HYD AUTO (36A1) P/O K70 - HYD TRANSFER PUMP RELAY P/O K19 - HYD ISOLATION 10 SEC TIME DELAY RELAY P/O K54 - TRANSFER PUMP SHUTOFF RELAY (L. GLOVE RELAY BOX 773A1) P/O AC EXTERNAL FMR CONTACTOR (66A6A83)	03043	QSL262	INSPD FIG. 35 ZONE 238, 158 8B, 7B, 1A, 3A, 5B	262
263	DC-1 POLE	V-28VDC	FLT TRANSFER PUMP SHUT OFF VALVE P/O FLT SYSTEM PRESSURE MODULE (47A1)				CB19(5A) HYD VALVE CONTR (36A2) CB40(75A) EMERG 6 FLT HYD AUTO (36A1) P/O K54-TRANSFER PUMP SHUTOFF RELAY P/O K19-HYD ISOLATION 10 SEC TIME DELAY RELAY P/O K70 HYD TRANSFER PUMP RELAY (L. GLOVE RELAY BOX 773A1) P/O AC EXTERNAL FMR CONTACTOR (66A6A83)	07Q35	QSL263	INSPD FIG. 35 ZONE 118, 158 8B, 7A, 1A, 3A, 2A, 5B, 4B, 3B, 2B	263
264	DC-1 POLE	V-28VDC	NORMAL ISOLATION SHUT OFF VALVE P/O COMBINED SYSTEM PRESSURE MODULE (47A2)				CB19(5A) HYD VALVE CONTR (36A2) P/O K19-HYD SAFETY J P/O K19-HYD SAFETY A P/O K2-AUG SAFETY C P/O K70-HYD SAFETY PUMP RELAY (L. GLOVE RELAY BOX 773A1)	03044	QSL264	INSPD FIG. 35 ZONE 24C, 20C 8A, 7A, 1A, 3A, 2A, 5B, 7B, 5B, 4B, 3B, 2B	264

FIGURE 35. SHEET 2

TABLE II. P-34 SOLID STATE POWER CONTROLLERS AND DRIVERS

1 Table Item #	2 Type of Power Controller	3 Rating V & I	4 Associated Loads	5 Duty Cycle	6 Load Power Dissipation	7 P.C. Location	8 Conventional Devices Being Replaced	9 Operational Address	10 Identifier Code	11 Reference Drawings	12 Associated Boolean Equations
265	DC-1 POLE	V=28VDC	a) FLIGHT SYSTEM PRESSURE MODULE (47A1) (FIT/GRD TST SHUTOFF VALVE) b) COMBINED SYSTEM PRESSURE MODULE (47A2) (COMBINED GRD TST SHUTOFF VALVE)				CS40(7.5A) DMEGR. FLT HYD AUTO (5A2) P/O K2 MUG SAFETY F (R. GLOVE RELAY BOX 77CA1) F/O AC EXTERNAL POWER CONTACTOR (66A6A3)	0345	QSL265	INSPD FIG. 35 ZOMB 20B, 24B 12B, 16B, 5B 4B, 3B, 1A,	265
266	DC-1 POLE	V=28VDC	FLIGHT CONTROL BACKUP MODULE (63B2)				SAME AS ITEM 265	11Q30	QSL266	INSPD FIG. 35 ZOMB 1A, 3B, 4B, 5B, 26B, 28B 25A, 27B	266
267	RELAY DRIVER	V=28VDC	FLIGHT CONTROL BACKUP MODULE ELECTRIC MOTOR (63B2) HIGH SPEED RELAY				CS39(5A) DMEGR. FLT HYD MAN (5A1) CS40(7.5A) DMEGR. FLT HYD AUTO (5A1) P/O K2-MUG SAFETY F (R. GLOVE RELAY BOX 77CA1) F/O AC EXTERNAL POWER CONTACTOR (66A6A3)	11Q31	QSL267	INSPD FIG. 35 ZOMB 25A, 6C, 5B, 7C, 1A, 4B, 3B	267
268	RELAY DRIVER	V=28VDC	FLIGHT CONTROL BACKUP MODULE (63B2) ELECTRIC MOTOR- LOW SPEED RELAY				CS39(5A) DMEGR. FLT HYD MAN (5A1) CS40(7.5A) DMEGR. FLT HYD AUTO (5A1) F/O AC EXTERNAL POWER CONTACTOR (66A6A3)	11Q32	QSL268	INSPD FIG. 35 ZOMB 25A, 7C AC, 5B, 2B 1A	268
269	DC-3 POLE (COULD BE 3-SINGLE POLE PC'S)	V=115VAC 4A, B, C	FLIGHT CONTROL BACKUP MODULE (63B2) ELECTRIC MOTOR	100%			CS39(50A) 4A FLT HYD BACKUP (35A1) CS32(50A) 4B FLT HYD BACKUP (35A1) CS39(50A) 4C FLT HYD BACKUP (35A1)		QSL269	INSPD FIG. 35 ZOMB 1B, 25A	269

FIGURE 36 SHEET 3

TABLE II. P-14 SOLID STATE POWER CONTROLLERS AND DRIVERS

1	2	3	4	5	6	7	8	9	10	11	12
Table Item #	Type of Power Controller	Rating V & I	Associated Loads	Duty Cycle	Load Power Dissipation	P.C. Location	Conventional Devices Being Replaced	Operational Address	Identifier Code	Reference Drawings	Associated Boolean Equations
270	AC-3 POLE	V-115VAC AA, B, C, I= 10A COOL					CB19(10A) SOL PMR #A (35A5) CB16(10A) SOL PMR #B (35A5) CB14(10A) SOL PMR #C (35A5) CB6(7.5A) EMERG FLT HTD SHTO (36A1) CB14(3A) ARM LOCK EXCIT (36A4) P/O AC EXT. PMR CONTACTOR #1, #2, #3, #4, #5, #6, #7, P/O PM RELAY ASSEMBLY 270 B (25-05 TEST) P/O K30 MISC SAFETY F (8-GLOW RELAY BOX 177A1) P/O K2-SOL PMR (PMO RELAY BOX 751A1) CB18(5A) MAJOR SUBSTS NO. 1 (ANG 9 DC PMR 31P)	03422	TEL270	INSPD FIG. 35 ZONE 8C, 4C, 3B, 2B, 1A INSPD FIG. 4A 73A, 73B, 73C 70C, 2A, 1B, 2B	270
271	AC-1 POLE	V-115VAC AA I=5A	a) HYDRAULIC PRESSURE TRANSMITTER (COMBINED) (37B2) b) P/O HYDRAULIC PRESSURE INDICATOR (37B1)	100%			CB19(5A) COMB HTD PRESS IND (35A2)	03423	SHL271	INSPD FIG. 35 ZONE 3B, 2C, 1C	271
272	AC-1 POLE	V-115VAC AA I=5A	a) HYDRAULIC PRESSURE TRANSMITTER (FLIGHT) (37B1)	100%			CB18(5A) FLT HTD PRESS IND (35A2)	03424	SHL272	INSPD FIG. 35 ZONE 3C, 2C, 1C	272
273	LAMP DRIVER	V=28VDC	P/O PILOT CAUTION ADVISOR INDICATOR (69A1) - HTD PRESS CB6(7.5A) EMERG. FLT HTD. AUTO				P/O PILOT CAUTION ADVISOR INDICATOR (69A1)-HTD PRESS CB6(7.5A) EMERG. FLT HTD. AUTO	01D05	SHL273	INSPD FIG. 35 ZONE 4A, 2B, 1A	273



TABLE II E-14 SOLID STATE POWER CONTROLLERS AND DRIVERS

1 Table Item #	2 Type of Power Controller	3 Rating V & I	4 Associated Loads	5 Duty Cycle	6 Load Power Dissipation	7 P.C. Location	8 Conventional Devices Being Replaced	9 Operational Address	10 Identifier Code	11 Reference Drawings	12 Associated Boolean Equations
274	DC-1 FOLE	V-28VDC I-5A	HYDRAULIC PRESSURE INDICATOR (37M1)	100%			CERO(5A)HYD PRESS IND (36A2)	011006	04L274	INSPD FIG. 35 ZONE 1A, 5A	274
275	RELAY DRIVER	V-28VDC	HYDRAULIC PRESSURE INDICATOR (37M1) EMERGENCY FLIGHT HYDRAULIC INDICATOR RELAY (H1)				P/O DGER FLT HDR IND RELAY R69 (LEFT GLOVE RELAY BOX 773A1) P/O M/G SAFETY 'N' RELAY R29 (RIGHT GLOVE RELAY BOX 773A1) AUX HYD CONT (SYSTEM TEST AND SYSTEM POWER FANBL 750A1) P/O M/G SAFETY F RELAY R2 (GLOVE RELAY BOX 773A1) P/O M/G EXTERNAL POWER CONTACTOR (60A43) SWO-ERRNG FLT HYD AUTO (36A1)	011007	04L275	INSPD FIG. 35 ZONE 25C, 26C 7A, 6C, 5B, 4B, 3B, 1A,	275
276	RELAY DRIVER	V-28VDC	HYDRAULIC PRESSURE INDICATOR (37M1)- EMERGENCY FLIGHT HYDRAULIC INDICATOR RELAY (H1)				SAME AS ITEM 275	011006	04L276	INSPD FIG. 35 ZONE 20C, 26C 7A, 6C, 5B, 4B, 3B, 1A,	276

TABLE III F-14 SYSTEM BOOLEAN EQUATIONS

FIGURE 35 SHEET 1

1 Table Item #	2 Boolean Equation	3 Transducer List Cross Reference	4 Solid State Controller List Cross Reference	5 Bus/Load Management Priority	6 Special Considerations	7 Reference Drawings	8 Equation Description & Notes
262	$QSL262 = QSL183 \bullet$ $(QGS182 \bullet QGS002 \bullet$ $QGS102 \bullet XAS180 \bullet$ $DHS032 \bullet XAS180 \bullet$ $DHS031) \bullet (XAS180 \bullet$ $EP3163 \bullet EP3181) \bullet$ $DHS032$	002 031 032 102 163 180 181 182 183	262	2	a) THE TERM $(XAS180 \bullet EP3163 \bullet$ $EP3181)$ REQUIRES 10 SECOND TIME DELAY AFTER GOING TO $(XAS180 \bullet EP3163$ $\bullet EP3181)$ b) ESS. NO. 2 BUS	INSFD FIG. 35 ZONE 238, 198 88, 76, 1A, 3A 58, 7A	COMBINED TRANSFER PUMP SHUTOFF VALVE (28VDC) = HYD TRANSFER PUMP-NORMAL AND (TRANSFER PUMP-ON OR LEFT OR RIGHT MUG-WEIGHT ON WHEELS NOT ON EXTERNAL AC PWR NOT ON LINE AND FLT PRESSURE-<2100 PSI OR EXTERNAL AC PWR-ON LINE OR COMBINED PRESSURE-<2100 PSI) AND (EXTERNAL AC PWR-ON LINE OR COMBINED SYS. PRESS - >400 PSI AND FLT. SYS. PRESS - > 400 PSI)* AND FLT PRESSURE - > 2100 PSI
263	$QSL263 = QGS183 \bullet$ $DHS032 \bullet (XAS180 \bullet$ $EP3163 \bullet EP3181) \bullet$ $(QGS182 \bullet DHS002 \bullet$ $QGS102 \bullet XAS180 \bullet$ $DHS032 \bullet DHS031)$	002 031 032 102 163 180 181 182 183	263	2	a) THE TERM $(XAS180 \bullet EP3163$ $\bullet EP3181)$ REQUIRES 10 SECOND DELAY AFTER BECOMING TRUE b) ESS. NO. 2 BUS	INSFD FIG. 35 ZONE 118, 158 88, 7A, 1A, 3A, 2A, 58, 48, 38, 28	FLIGHT TRANSFER PUMP SHUTOFF VALVE (28VDC) = HYD TRANSFER PUMP-SHUTOFF OR FLT. PRESSURE < 2100 PSI OR (EXTERNAL AC PWR - NOT ON LINE AND COMBINED SYSTEM PRESSURE - < 400 PSI OR FLT SYSTEM PRESSURE - < 400 PSI OR (TRANSFER PUMP - OFF AND LEFT AND RIGHT MUG WEIGHT ON WHEELS AND EXTERNAL AC PWR - ON LINE OR FLT PRESSURE > 2100 PSI AND EXTERNAL AC PWR - NOT ON LINE AND COMBINED PRESSURE - > 2100 PSI)
264	$QSL264 = (DHS052 \bullet$ $DHS032) \bullet (DHS002 \bullet$ $QGS102)$	002 092 032 102	264	2	ESS. NO. 2 BUS	INSFD FIG. 35 ZONE 24C, 20C, 8A, 7A, 1A	NORMAL ISOLATION SHUTOFF VALVE (28VDC) = LANDING GEAR CONTROL - UP (FLT) OR FLIGHT PRESSURE SWITCH - < 2100 PSI AND LEFT OR RIGHT MUG WEIGHT ON WHEELS NOT
265	$QSL265 = QGS182 \bullet$ $QGS002 \bullet QGS102 \bullet$ $XAS180$	002 102 180 182	265	2	ESS. NO. 2 BUS	INSFD FIG. 35 ZONE 248, 208, 168, 128, 58, 48, 38, 1A	FLT/GND AND COMBINED GND TEST SHUTOFF VALVE (28VDC) = TRANSFER PUMP - ON AND LEFT AND RIGHT MUG - WEIGHT ON WHEELS AND EXTERNAL AC POWER - ON LINE
266	$QSL266 = XAS180 \bullet$ $QGS002 \bullet QGS102 \bullet$ $QGS185 \bullet QGS184$	002 102 180 184 185	266	2	ESS. NO. 2 BUS	INSFD FIG. 35 ZONE 1A, 38, 48, 38, 268, 288, 258, 278	BACKUP MODULE GROUND SOLINOID VALVE (28VDC) = EXTERNAL AC PWR - ON LINE AND LEFT AND RIGHT MUG - WEIGHT ON WHEELS AND AIR HYD CONTROL AND BACKUP MODULE TEST SWITCH - CLOSED (< 180 PSI)

TABLE III P-14 SOSTEL BOOLEAN EQUATIONS

1 Table Item #	2 Boolean Equation	3 Transducer List Cross Reference	4 Solid State Controller List Cross Reference	5 Bus/Load Management Priority	6 Special Considerations	7 Reference Drawings	8 Equation Description & Notes
267	$Q01267 = Q03186$ + $Q05002 \bullet Q03102$ + $Q03185 \bullet Q03184$ + $Q03180$	002 102 180 184 185 186	267	1	ESS. NO. 1 BUS	INSFD FIG. 35 ZONE 25A, 6C, 5B, 7C, 1A, 4B, 3B	FLIGHT CONTROL BACKUP MODULE - ELECTRIC MOTOR HIGH SPEED RELAY ENERGIZED (HIGH SPEED) = EMERG FLT HYD - HI ON LEFT AND RIGHT MLG - WEIGHT ON WHEELS AND AUX. HYD CONT - ON AND BACKUP MODULE TEMP. SWITCH - CLOSED (COOL) AND EXTERNAL AC PWR - ON LINE
268	$Q01268 = Q03186$ + $Q05031 \bullet Q05032$ + $Q03180$	031 032 180 186	268	1	ESS. NO. 1 BUS	INSFD FIG. 35 ZONE 25A, 7C, 4C, 5B, 2B, 1A	FLIGHT CONTROL BACKUP MODULE - ELECTRIC MOTOR LOW SPEED RELAY ENERGIZED (LOW SPEED) = EMERG FLT HYD - LOW OR COMBINED AND FLIGHT PRESSURE SWITCH'S < 2100 PSI AND EXTERNAL AC PWR - NOT ON LINE
269	$Q01269$	N/A	269	3	R. MAIN BUS	INSFD FIG. 35 ZONE 1B, 25A	FLIGHT CONTROL BACKUP MODULE - ELECTRIC MOTOR 5A, B & C - 115 VAC R MAIN BUS ENERGIZED
271	$D01271$	N/A	271	2	ESS. NO. 2 BUS	INSFD FIG. 35 ZONE 3B, 2C, 1C	HYDRAULIC PRESSURE TRANSMITTER (COMBINED) (37B2) - 11.2 VAC AND HYDRAULIC PRESSURE INDICATOR (COMB) (37A1) - 115 VAC - 115 VAC ESS NO. 2 INSTR BUS ENERGIZED
272	$D01272$	N/A	272	2	ESS. NO. 2 INSTR BUS	INSFD FIG. 35 ZONE 3C, 2C, 1C	HYDRAULIC PRESSURE TRANSMITTER (FLIGHT) (37B1) - 115VAC AND HYDRAULIC PRESSURE INDICATOR (FLT) (37A1) - 115VAC - 115VAC ESS. NO. 2 INSTR BUS ENERGIZED
273	$D01273 = D05031 \bullet D05032$	031 032	273	1	ESS. NO. 1 BUS	INSFD FIG. 35 ZONE 4A, 2B, 1A	PILOT CAUTION ADVISORY INDICATOR (69A1) HYD PRESS (ILLUMINATED) = COMBINED PRESSURE - < 2100 PSI OR FLIGHT PRESSURE < 2100 PSI
274	$D01274$	N/A	274	2	ESS. NO. 2 BUS	INSFD FIG. 35 ZONE 1A, 5A	HYDRAULIC PRESSURE INDICATOR (36A2) - 28VDC - 28VDC ESS NO. 2 BUS ENERGIZED
275	$D01275 = (D05002 \bullet$ $D03102) \bullet Q03187$	002 102 187	275	1	ESS. NO. 1 BUS	INSFD FIG. 35 ZONE 2A, 2C, 7A, 6C, 5B, 4B, 3B, 1A	EMERGENCY FLIGHT HYDRAULIC INDICATOR (37A1) (LOW) - LEFT OR RIGHT MLG - WEIGHT ON WHEELS NOT AND BACKUP MODULE PRESSURE SWITCH - CLOSED

TABLE III. P-14 BOOSTER BOOLEAN EQUATIONS

1 Table Item #	2 Boolean Equation	3 Transducer List Cross Reference	4 Solid State Controller List Cross Reference	5 Bus/Load Management Priority	6 Special Considerations	7 Reference Drawings	8 Equation Description & Notes
276	$IML276 = (GDS002 \bullet$ $GDS102)$ $\bullet QGS187$	002 102 187	276	1	ESS. NO. 1 BUS	INSPD FIG. 35 ZONE 28C, 26C 7A, 6C, 5B, 4B, 3B, 1A	EMERGENCY FLIGHT HYDRAULIC INDICATOR (37M1) (HI) = LEFT AND RIGHT MUG - WEIGHT ON WHEELS AND BACKUP MODULE PRESSURE SWITCH - CLOSED
270	$TBL270 = (HHS032$ $\bullet DHS931 \bullet XAS186$ $\bullet (XAS003 \bullet XAS004))$ $\bullet (GDS002 \bullet GDS102$ $\bullet HHS127 \bullet TBS721)$	002 003 004 031 032 102 127 186 721	270	1	ESS. NO. 1 BUS	INSPD FIG. 35 ZONE 6C, 4C, 3B, 2B, 1A. INSPD FIG. 4A 73A, 73B, 71C 70C, 2A, 1B	SOLINOID POWER SUPPLY (27A7) (015) - 115VAC 6A, B, C = FLIGHT PRESSURE AND COMBINED PRESSURE - < 2100 PSI AND EXTERNAL AC PWR - NOT ON LINE AND RIGHT OR LEFT MATH AC PWR - ON LINE) OR (LEFT AND RIGHT MUG - WEIGHT ON WHEELS AND GND CUG - ORC/CABIN AND OIL FLOW - > 1.0 GPM)

FIGURE 37 SHEET 1

TABLE I. F-14 SOSTEL SIGNAL TRANSDUCERS

1 Table Item #	2 Signal Name/Function	3 Identifier Code	4 Signal Source Box Identification	5 Point of Origin	6 Transducer Type	7 Present Signal Characteristics	8 Associated Loads	9 Conventional Switches Being Replaced or Deleted	10 Operational Address	11 Reference Drawings	12 Associated Boolean Equation	13 Conditioning Technique
105	PRESSURE - ON > 2000 ± 50 PSI	DHS 105	SPOILER/HIGH-LEFT BACKUP MODULE (52BL) PRESSURE SWITCH	LEFT SIDE FS440	PRESSURE SWITCH	> 2000 ± 50PSI- GND > 2000 ± 50PSI- OPEN	HYDRAULIC PRESSURE INDICATOR (37M1)	N/A	OSP18	INSFD FIG. 37 ZONE 5C	100	RESISTOR DIVIDER ADAPTER
106	SPOILERS - ON	ODS 106	SYSTEM TEST - SYSTEM POWER PANEL (75A11) / SPOILERS SWITCH	WFO'S LEFT/TOGGLE SWITCH FREE PANEL FS300	TOGGLE SWITCH	ON - OPEN OFF - SWITCHED 28V	OUTBOARD SPOILERS MOTOR-PUMP POWER RELAY R1	SPOILERS-ON/OFF SWITCH	OSP17	INSFD FIG. 37 ZONE 5A		SOLID STATE
107	EXTERNAL ELECTRICAL POWER - ON	KAS107	AC POWER CONTACTOR ASSEMBLY (66A3K3)	LEFT SIDE FS330 W1140	PRESENTLY ELEC. CONTACTORS (REQUIRE VOLTAGE SENSE CIRCUIT FOR EXTERNAL PWR)	ON - SWITCHED 28V OFF - OPEN	SAME AS ITEM 106	N/A	OSP19	INSFD FIG. 37 ZONE 4B		RESISTOR DIVIDER ADAPTER
108	TEMP. SWITCH > 275° ± 15°	DHS108	SPOILERS/HIGH-LEFT BACKUP MODULE (52BL) TEMPERATURE SWITCH	LEFT SIDE FS440	TEMPERATURE SWITCH	> 275° ± 15° SWITCHED 28VDC < 275° ± 15° OPEN	SAME AS ITEM 106	N/A	OSP20	INSFD FIG. 37 ZONE 5C		RESISTOR DIVIDER ADAPTER



FIGURE 27. SHEET 1

TABLE II. P-14 SOLID STATE POWER CONTROLLERS AND DRIVERS

1 Table Item #	2 Type of Power Controller	3 Rating V & I	4 Associated Loads	5 Duty Cycle	6 Load Power Dissipation	7 P.C. Location	8 Conventional Devices Being Replaced	9 Operational Address	10 Identifier Code	11 Reference Drawings	12 Associated Boolean Equations
180	DC-1 POLE (INDICATOR DRIVER)	V=28VDC I=5A	HYDRAULIC PRESSURE INDICATOR (370AL) SPOILER				CB20(5A) HYD PRESS IND (36A2)	01D09	HL180	INSFD FIG. 37 ZONE 3C, 5C	180
181	AC-3 POLES	V=115VAC RA, B, & C I=50 AMP EACH	SPOILER/HIGH-LIFT BACKUP MODULE (538A) ELECTRIC MOTOR				CB35(50A) OUTBOARD SPOILER PUMP PH A (35AL) CB33(50A) OUTBOARD SPOILER PUMP PH B (35AL) CB31(50A) OUTBOARD SPOILER PUMP PH C (35AL) CB60(3A) HYD PUMP SPOILER (36A2) CB3(5A) AUX FLAP/FLAP CONTR (36A2) P/O RA M/G SAFETY "L" RELAY (L.GLOVE RELAY BOX 773AL) P/O KB9 M/G SAFETY "H" RELAY (L.GLOVE RELAY BOX 773AL) P/O KB8 M/G SAFETY "A" RELAY (L.GLOVE RELAY BOX 773AL) OUTBOARD SPOILERS MOTOR/ PUMP POWER RELAY - K1 (HYD. BACKUP CONTACTOR ASSEMBLY 787AL)	03450	CEL181	INSFD FIG. 37 ZONE 7B, 6A 6C, 5C, 4B 3B, 3A	181

TABLE III F-14 SOSTEL BOOLEAN EQUATIONS

1 Table Item #	2 Boolean Equation	3 Transducer List Cross Reference	4 Solid State Controller List Cross Reference	5 Bus/Load Management Priority	6 Special Considerations	7 Reference Drawings	8 Equation Description & Notes
180	IMH180 = IMH105	105	180	2	ESS. NO. 2 BUS	INSFD FIG. 37 ZONE 3C, 5C	SPOILER PRESSURE ON = PRESSURE SWITCH INDICATING > 2000 ± 50 PSI
181	<ul style="list-style-type: none"> <li>GUL181 = CKS001</li> <li>+ GDS106 • XAS107</li> <li>+ GDS002 • GDS102</li> <li>XAS107 • CKS006</li> <li>+ GDS108 • (GDS002)</li> <li>+ GDS002 • GDS102</li> </ul>	<ul style="list-style-type: none"> <li>001</li> <li>002</li> <li>006</li> <li>052</li> <li>102</li> <li>106</li> <li>107</li> <li>108</li> </ul>	181	3	RIGHT MAIN BUS	INSFD FIG. 37 ZONE 7B, 6A, 6C, 5C, 4B, 3B 3A	<p>115VAC #A, B &amp; C POWER TO THE SPOILER/HIGH LIFT BACKUP MODULE MOTOR IS OFF = WING SPOILER &lt; 62° OR SYSTEM TEST SPOILER SWITCH IS OFF AND EXTERNAL POWER FOR GND TEST IS ON OR L AND R MLG WEIGHT IS ON WHEELS AND EXTERNAL POWER IS OFF AND THE FLAP HANDLE IS &lt; 60 OR THE BACKUP MODULE TEMPERATURE SWITCH INDICATES &gt; 275° ± 15° AND THE MLG HANDLE IS UP OR L AND R MLG WEIGHT IS ON WHEELS</p>

TABLE 1. F-14 SOSTE SIGNAL TRANSDUCERS

FIGURE 38 SHEET 1

1 Table Item #	2 Signal Name/Function	3 Identifier Code	4 Signal Source Box Identification	5 Point of Origin	6 Transducer Type	7 Present Signal Characteristics	8 Associated Loads	9 Conventional Switches Being Replaced or Deleted	10 Operational Address	11 Reference Drawings	12 Associated Boolean Equation	13 Conditioning Technique
109	RIGHT ENG. OIL TEMP > 250°F	ENS109	ENGINE OIL TEMP SWITCH (70A4)	RIGHT ENGINE FS360	TEMPERATURE SWITCH	> 250°F = SWITCH 28VDC < 250°F = OPEN	a) L OIL HOT b) R OIL HOT PILOT CAUTION & ADVISORY INDICATOR	ENGINE OIL TEMP SWITCH (70A4)	0AP15	IMSFD FIG. 38 ZONE 1A NAVALIA OI-F14AAA 2-2-6 00660 FIG. 2	190	SOLID STATE
157	RIGHT OWSP	ENS157	ENGINE ROTOR OVERSPEED DETECTOR (34A11)	RIGHT SIDE FS220	N/A	OWSP = 28VDC OWSP = OPEN	R OWSP/VALVE LAMP P/O PILOT CAUTION ADVISORY INDICATOR (69A1)	N/A	0TR23	IMSFD FIG. 38 ZONE 8B	229	EXTERNAL SIGNAL AMPLIFIER
158	LEFT OWSP	ENS158	ENGINE ROTOR OVERSPEED DETECTOR (34A11)	RIGHT SIDE FS220	N/A	OWSP = 28VDC OWSP = OPEN	L OWSP/VALVE LAMP P/O PILOT CAUTION ADVISORY INDICATOR (69A1)	N/A	0TR24	IMSFD FIG. 38 ZONE 8C	230	EXTERNAL SIGNAL AMPLIFIER

FIGURE 18 SHEET 1

TABLE II. P-10 SOLID STATE POWER CONTROLLERS AND DRIVERS

1 Table Item #	2 Type of Power Controller	3 Rating V & I	4 Associated Loads	5 Duty Cycle	6 Load Power Dissipation	7 P.C. Location	8 Conventional Devices Being Replaced	9 Operational Address	10 Identifier Code	11 Reference Drawings	12 Associated Boolean Equations
182	DC - 1 POLE	V-28VDC I = 3A	TONE GENERATOR (3462)	100%			CR68(3A) ENG. STALL TONE (3562)	01D10	EM1182	INSPD FIG. 38 ZONE 11B, 1A	182
183	AC - 1 POLE	V-115VAC PB I = 3A	FUEL FLOW INDICATOR (3441)	100%			CR27(3A) R. ENG. FUEL FLOW IND. (3562)	03425	EM1183	INSPD FIG. 38 ZONE 15A, 1B	183
184	AC - 1 POLE	V-115VAC PB I = 3A	RPM INDICATOR (3443) (LEFT CHANNEL)	100%			CR22(3A) L. ENG. N <sub>2</sub> TACH (3562)	03426	EM1184	INSPD FIG. 38 ZONE 6B, 1B	184
185	AC - 1 POLE	V-115VAC PB I = 3A	RPM INDICATOR (3443) (RIGHT CHANNEL)	100%			CR21(3A) R. ENG. N <sub>2</sub> TACH (3562)	03427	EM1185	INSPD FIG. 38 ZONE 6B, 1B	185
186	AC - 1 POLE	V-115VAC PB I = 3A	TIT INDICATOR (3442) (LEFT CHANNEL)	100%			CR25(3A) L. TIT IND. (3562)	03428	EM1186	INSPD FIG. 38 ZONE 9B, 1B	186
187	AC - 1 POLE	V-115VAC PB I = 3A	TIT INDICATOR (3442) (RIGHT CHANNEL)	100%			CR24(3A) R. TIT IND. (3562)	03429	EM1187	INSPD FIG. 38 ZONE 10C, 1B	187
188	AC - 1 POLE	V-115VAC PB I = 3A	a) ENGINE ROTOR OVERSPEED DETECTOR (3441) b) FUEL RATE-OF-FLOW POWER SUPPLY (3441) c) FV INDICATOR (3441)				CR16(3A) ENG. FUEL FLOW L IND/OVSP (3562)	04463 02403 03430	EM1188	INSPD FIG. 38 ZONE 1A, 7C 11B, 14B	188
189	DC - 1 POLE	V-28VDC I = 5A	ENGINE ROTOR OVERSPEED DETECTOR (3441)	100%			CR24(5A) OVSP CAUTION/ R OIL HOT (3642)	05401	EM1189	INSPD FIG. 38 ZONE 1A, 7B	189
190	LAMP DRIVER	V-28VDC	R OIL HOT PILOT CAUTION & ADVISORY INDICATOR (69A1)				SHARED WITH CR24 (ITEM 189)	01D11	EM1190	INSPD FIG. 38 ZONE 1A FL444A-2-6 K06600 FIG. 2	190

FIGURE 3B, SHEET 2

TABLE II. F-14 SOLID STATE POWER CONTROLLERS AND DRIVERS

1 Table Item #	2 Type of Power Controller	3 Rating V & I	4 Associated Loads	5 Duty Cycle	6 Load Power Dissipation	7 P.C. Location	8 Conventional Devices Being Replaced	9 Operational Address	10 Identifier Code	11 Reference Drawings	12 Associated Boolean Equations
191	AC - 1 POLE	V-20VAC I - 3A	a) R ENG. EXHAUST NOZZLE POSITION INDICATOR (3440) b) R ENG. OIL PRESSURE INDICATOR (3440) c) R. EXHAUST NOZZLE POSITION TRANSMITTER (4094) d) R OIL PRESSURE TRANSMITTER (3412)	100%  100%  100%  100%			CH3(3A) R ENG. OIL PRESS/NOZ IND (3544)	03435	EPL191	INSPD FIG. 3B ZONE 1C, 2A, 2B, 4A, 4B	191



TABLE II P-33 SOLID STATE POWER CONTROLLERS AND DRIVERS

1 Table Item #	2 Type of Power Controller	3 Rating V & I	4 Associated Loads	5 Duty Cycle	6 Load Power Dissipation	7 P.C. Location	8 Conventional Devices Being Replaced	9 Operational Address	10 Identifier Code	11 Reference Drawings	12 Associated Boolean Equations
192	AC-1 Pole	V=26 VAC	a) Left oil pressure transmitter (34.12) b) Left exhaust nozzle position transmitter (34.84) c) Left engine oil pressure indicator (34.85) d) Left engine exhaust nozzle position indicator (34.86)	100% 100% 100% 100%			CB(3A) L Eng. Oil Press/Noz Ind.	01Q36	EP1292	INSFD M8.3B Zone 1C, 3E, 3C, 4B, 4C	192

TABLE III P-14 SYSTEM BOOLEAN EQUATIONS

1	2	3	4	5	6	7	8
Table Item #	Boolean Equation	Transducer List Cross Reference	Solid State Controller List Cross Reference	Bus/Load Management Priority	Special Considerations	Reference Drawings	Equation Description & Notes
182	EML182	NA	182	2	ESS, No. 2 Bus	INSPD Fig. 38 Zone 11B, 1A	28VDC to the Pone generator = 28 VDC Ess. #2 Bus energized
183	EHL183	NA	183	2	Instrument Bus	INSPD Fig. 38 Zone 15A, 1B	115VAC $\phi$ B to the fuel flow indicator = 115VAC $\phi$ B Instrument Bus energized
184	EUL184	NA	184	2	Instrument Bus	INSPD Fig. 38 Zone 6B, 1B	115VAC $\phi$ B to the left channel RPM indicator = 115VAC $\phi$ B Instrument Bus energized
185	EUL185	NA	185	2	Instrument Bus	INSPD Fig. 38 Zone 6B, 1B	115VAC $\phi$ B to the right channel RPM indicator = 115VAC $\phi$ B Instrument Bus energized
186	ELL186	NA	186	2	Instrument Bus	INSPD Fig. 38 Zone 9B, 1B	115VAC $\phi$ B to the left channel turbine inlet temperature (TIT) indicator = 115VAC $\phi$ Instrument Bus energized
187	ELL187	NA	187	2	Instrument Bus	INSPD Fig. 38 Zone 10C, 1B	115VAC $\phi$ B to the right channel turbine inlet temp. (TIT) indicator = 115VAC $\phi$ Instrument Bus energized
188	EHL188	NA	188	2	Instrument Bus	INSPD Fig. 38 Zone 1A, 7C, 11B, 14B	115VAC $\phi$ B to the a) Engine rotor overspeed detector b) Fuel Rate-of-Flow Per supply c) PF indicator = 115VAC $\phi$ B Instrument Bus energized
189	EML189	NA	189	2	ESS, No. 2 Bus	INSPD Fig. 38 Zone 1A, 7B	28VDC to the engine rotor overspeed detector = 28VDC ESS. #2 Bus energized
190	EML190 = EML109	109	190	2	ESS, No. 2 Bus	a) INSPD Fig. 38 Zone 1A b) INVAIR 01-PIGADA-2-2-6 00000 Fig. 2	R Oil hot indicator $\phi$ B = Right engine oil temperature switch closed (> 250°F)
191	EFL191	NA	191	2	Eng. Inst. Bus	INSPD Fig. 38 Zone 1C, 2A, 2B 4A, 4B	26VAC to the a) R. Eng exhaust nozzle position indicator b) R. Eng. oil press. indicator c) R. Exhaust nozzle position transmitter d) R. Oil press. transmitter = 26VAC engine instrument Bus energized

TABLE III F-14 SUSTAINABLE EQUATIONS

1 Table Item #	2 Boolean Equation	3 Transducer List Cross Reference	4 Solid State Controller List Cross Reference	5 Bus/Load Management Priority	6 Special Considerations	7 Reference Drawings	8 Equation Description & Notes
192	EF1192	NA	192	2	Eng. Inst. Bus	WSPD Fig. 3B Zone 1C, 3B, 3C 4B, 4C	26VAC to the a) L. Oil press. transmitter b) L. Exhaust nozzle position transmitter c) L. Eng. oil press. indicator d) L. Eng. exhaust nozzle position indicator = 26VAC engine instrument bus energized

FIGURE 30 SHEET 1

TABLE 1 P-14 SATEL SIGNAL TRANSDUCERS

1 Table Item #	2 Signal Name/Function	3 Identifier Code	4 Signal Source Box Identification	5 Point of Origin	6 Transducer Type	7 Present Signal Characteristics	8 Associated Loads	9 Conventional Switches Being Replaced or Deleted	10 Operational Address	11 Reference Drawings	12 Associated Boolean Equation	13 Conditioning Technique
110	Left engine mach switch - ≥ 2.1 Mech	KCS110	Left Engine Mach switch (M/B Bleed System)	Left En- gine PS650	Limit Switch	≥ 2.1 Mech = switched 28VDC < 2.1 Mech = open	Left engine M/B Bleed Control Solenoid	Left engine mach switch	06P30	INSPD Fig. 39 Zone 8A	193	Solid state
111	Left engine P/A Switch - Idle	KCS111	Left engine P/A switch (M/B Bleed System)	Left En- gine Electro- Mech Actua- tor PS640	Limit switch	Idle = switched 28VDC, INSPD and above = open	Left engine M/B Bleed Control Solenoid	N/A	06P31	INSPD Fig. 39 Zone 8A	193	Resistor Divider Adapter
112	Left not slow- ed > 0.9 Mech	KCS112	Left diffuser ramp out of slow switch (32SA) (Left air inlet control system)	Left Inlet Glove PS660	Limit switch	Not slowed > 0.9 Mech = switched 28VDC Slowed < 0.9 Mech = Open	Left engine M/B Bleed Control Solenoid	Left Diffuser Ramp out of slow switch (32SA)	05P21	INSPD Fig. 39 Zone 8C	193 540	Solid State
113	Left Throttle < 31°	QCS113	Throttle Quadrant (711A1)	Pilots Left Side Console PS225	Limit Switch	< 31° = Switched 28VDC > 31° = Open	a) K200 R. engine air- flow im- provement time delay (left glove relay box 773A1) b) K201 - L. engine airflow im- provement time delay relay (left glove relay box 773A1) c) Left en- gine M/B Bleed Con- trol Solen- oid	N/A	01P39	INSPD Fig. 39 Zone 3C	193	Resistor Divider Adapter

FIGURE 39 SHEET 2

TABLE I P-14 SOSTEL SIGNAL TRANSDUCERS

1 Table Item #	2 Signal Name/Function	3 Identifier Code	4 Signal Source Box Identification	5 Point of Origin	6 Transducer Type	7 Present Signal Characteristics	8 Associated Loads	9 Conventional Switches Being Replaced or Deleted	10 Operational Address	11 Reference Drawings	12 Associated Boolean Equation	13 Conditioning Technique
114	Left Bleed Exit Door Command - ON	KCS114	Left air inlet con- trol programmer (3540)	Left PS360	N/A (Wiley Drive cir- cuit)	ON = CND OFF = OPEN	K66- L AUCS bleed door posi- tion/MCB relay (left glove relay box 773A1)	N/A	05027	INGSD Fig. 39 Zone 6A INGSD Fig. 4 Zone 15C 19C	193	External Sig- nal Adapter
115	Rudder left deflection - > 10°	CJS115	MCB Rudder Switch (8081)	PS700	Limit switch	> 10° = switched 28VDC < 10° = Open	a) K201 left engine air- flow improve- ment time delay relay (left glove relay box 773A1) b) K200 right engine airflow im- provement time delay relay (left glove relay box 773A1)	MCB Rudder Switch (8081)	07029	INGSD Fig. 39 Zone 5C	193	Solid State
116	Rudder flight deflection - > 10°	CJS116	MCB Rudder switch (8082)	PS700	Limit switch	> 10° = switched 28VDC < 10° = Open	Same as Item 115	MCB Rudder Switch (8082)	07030	INGSD Fig. 39 Zone 5B	193 194	Solid state
117	Right throttle - < 31°	QCS117	Throttle quadrant (711A1)	Pilots left side side con- sole PS225	Limit switch	< 31° = Switched 28VDC > 31° = Open	a) R. engine MCB bleed control sol- enoid b) K200 - R. engine air- flow improve- ment time delay relay (left glove relay box 773A1)	N/A	02043	INGSD Fig. 39 Zone 3C	194	Resistor Divider Adapter



FIGURE 3-13 SHEET 3

TABLE I. F-14 SUGTEL SIGNAL TRANSDUCERS

1 Table Item #	2 Signal Name/Function	3 Identifier Code	4 Signal Source Box Identification	5 Point of Origin	6 Transducer Type	7 Present Signal Characteristics	8 Associated Loads	9 Conventional Switches Being Replaced or Deleted	10 Operational Address	11 Reference Drawings	12 Associated Boolean Equation	13 Conditioning Technique
117 (cont'd)							c) K201 - L <sub>1</sub> engine air- flow im- provement time delay relay (left glove relay box 773A1)					
118	Right not stowed > 0.9 Mech	KCS118	Right diffuser ramp out of stow switch (3288) (right air inlet control sys- tem)	Right in- let glove FS460	Limit switch	Not stowed > 0.9 Mech = switched 28VDC Stowed < 0.9 Mech = Open	Right engine M/B bleed control sol- enoid	Diffuser ramp out of stow switch (3288)	0AP16	WSPD Fig. 39 Zone 1A	194 539	Solid state
119	Right bleed exit door command - ON	KCS119	Right air inlet control programmer (32A7)	Right FS380	N/A (Relay drive cir- cuit)	ON - GND OFF = Open Mech = Open	K57 right bleed door position/ M/B relay (left glove relay box 773A1)	N/A	07D25	WSPD Fig. 39 Zone 6B WSPD Fig. 4 Zone 19A, 16C	194	External Sig- nal Adapter
120	Inflight re- fueling probe door - Open	QPS120	Inflight refuel probe door switch (62S1)	Right FS170	Limit switch	Door Open - GND Door closed = 28VDC or open	K37 M/B Open/refuel- ing probe (left glove relay box 773A1)	Inflight refuel probe door switch (62S1)	Q2P44	WSPD Fig. 39 Zone 6C WSPD Fig. 41 Zone 8B	194 502	Solid state
121	AOA > 17 units (> 12° AOA)	FES121	Angle of Attack (AOA) Indicator (4502)	Pilots left in- strument panel FS225	Limit switch	> 17 units = switched 28VDC < 17 units = open	K38 - > 12° AOA Relay (R. glove relay box 772A1)	N/A	Q1P40	WSPD Fig. 39 Zone 3C	193 194	Resistor Divider Adapter

TABLE I. F-14 SUSTEL SIGNAL TRANSDUCERS

1 Table Item #	2 Signal Name/Function	3 Identifier Code	4 Signal Source Box Identification	5 Point of Origin	6 Transducer Type	7 Present Signal Characteristics	8 Associated Loads	9 Conventional Switches Being Replaced or Deleted	10 Operational Address	11 Reference Drawings	12 Associated Boolean Equation	13 Conditioning Technique
122	Right engine Mach switch - > 2.1 Mach	KCS122	Right engine Mach switch (MKB bleed system)	Right Engine FS650	Limit switch	> 2.1 Mach = Switched 28VDC < 2.1 Mach = Open	Right engine MKB bleed control sol- enoid	Right engine Mach switch	OTP31	IMSTD Fig. 39 Zone 8A	194	Solid state
123	Right engine PIA switch - Idle	KCS123	Right engine PIA switch (MKB bleed system)	R. engine Elect. - Mach. Rotary Actuator FS640	Limit switch	Idle = Switched 28VDC, IMSTD and above = Open	Right engine MKB bleed control sol- enoid	N/A	OTP32	IMSTD Fig. 39 Zone 8A	194	Resistor Divider Adapter

TABLE 11. P-14 SOLID STATE POWER CONTROLLERS AND DRIVERS

1 Table Item #	2 Type of Power Controller	3 Rating V & I	4 Associated Loads	5 Duty Cycle	6 Load Power Dissipation	7 P.C. Location	8 Conventional Devices Being Replaced	9 Operational Address	10 Identifier Code	11 Reference Drawings	12 Associated Boolean Equations
193	DC-1 Pole	V=250VDC I=5A	Left engine MEB bleed solenoid				CB57 (5A) L mid CFESN bypass (36A2) (Same as item 191) CB59 (5A) Mech lever shift (36A2) P/O K18 M.G handle relay A (left glove relay box 773A1) P/O K57 Gun/missile firing interlock 5 sec- ond time delay relay (left glove relay box 773A1) P/O K66 L, AICS bleed door position/MEB relay (left glove relay box 773A1) P/O K201 Left engine airflow improvement time delay relay (left glove relay box 773A1) P/O K88 > 120° angle-of- attack relay (right glove relay box 772A1)	09Q08	KJL193	IMSFD Fig. 39	193

TABLE II F-4U SOLID STATE POWER CONTROLLERS AND DRIVERS

1 Table Item #	2 Type of Power Controller	3 Rating V & I	4 Associated Loads	5 Duty Cycle	6 Load Power Dissipation	7 P.C. Location	8 Conventional Devices Being Replaced	9 Operational Address	10 Identifier Code	11 Reference Drawings	12 Associated Boolean Equations
1/4	DC - 1 Pole	V <sub>dc</sub> 25VDC I <sub>dc</sub> 5A	Right engine MFB BLEED SOLENOID				CB58 (5A) R mid CPSEN bypass (36A2) see item 140 CB59 (5A) Mech lever shift (36A2) (shared with item 193) F/O K87 MFB Open/ re- fueling probe (left glove relay box 773A1) F/O K87 right bleed door position/MCB relay (left glove relay box 773A1) F/O K200 right engine airflow improvement time delay relay (left glove relay box 773A1) F/O K57 Gun/Missile Firing Interlock 5 sec. time delay relay (left glove relay box 773A1) F/O K20 MFB control handle relay B and F/O K88 > 12° AOA relay (right glove relay box 772A1)	10007	KJL194	14830 Fig. 39	194

TABLE III F-14 SUSTEL BOOLEAN EQUATIONS

FIGURE 39 SHEET 1

1 Table Item #	2 Boolean Equation	3 Transducer List Cross Reference	4 Solid State Controller List Cross Reference	5 Bus/Load Management Priority	6 Special Considerations	7 Reference Drawings	8 Equation Description & Notes
193	$KJL193 =$ $KCS110 + (KCS111 \bullet$ $QCS092) + (KCS112 \bullet$ $QCS113) + KCS076 \bullet$ $+ KCS114 +$ $(QCS113 \bullet CJS115 +$ $CJS116) \bullet \bullet + (FMS121 \bullet$ $QCS113)$	092 076 110 111 112 113 114 115 116 121	193	2	a) See *, ** b) Eas. No. 2 Bus	INSPD Fig. 39	28VDC to the left engine mid compression bypass bleed solenoid = left engine $\geq 2.1$ Mech OR left engine FIA-IDLE AND M/G handle-down OR left air inlet diffuser ramp - not stowed AND left throttle - $< 310$ OR (Gun/Missile Firing)* OR left air inlet bleed exit door command OR (left throttle - $< 310$ AND rudder deflection $> 100$ left OR right)** OR angle of attack - $> 120$ AND left throttle - $< 310$ * (Gun/Missile firing) - Requires 5 second drop-out time delay after signal goes false ** (Left throttle $< 310$ and rudder deflection $> 710$ left OR right) - Requires 1 second drop-out time delay if throttle $< 310$ AND rudders $< 100$ , "Immediate" drop-out if throttle $> 310$ AND rudders $> 100$
194	$KJL194 = KCS122$ $+ (KCS123 \bullet QCS092)$ $+ (KCS118 \bullet QCS117)$ $+ KCS076 \bullet + KCS119$ $+ QCS120 \bullet$ $(QCS117 \bullet CJS115$ $+ CJS116) \bullet \bullet + (FMS121$ $\bullet QCS117)$	092 076 116 117 118 119 120 121 122 123	194	2	a) See *, ** b) Eas. No. 2 Bus	INSPD Fig. 39	28VDC to the right engine mid compression bypass bleed solenoid = right engine $\geq 2.1$ Mech OR right engine FIA - IDLE AND M/G handle-down OR right air inlet diffuser ramp - not stowed AND right throttle - $< 310$ OR (Gun/Missile firing)* OR right air inlet bleed exit door command OR inflight refueling probe door - open OR (right throttle - $< 310$ AND rudder de- flection $> 100$ left OR right)** OR angle of attack - $> 120$ AND right throttle - $< 310$ * (Gun/Missile firing) required 5 second drop-out time delay after signal goes false ** (Right throttle $< 310$ AND rudder deflection $> 100$ left OR right) - Requires 1 second drop-out time delay if throttle $< 310$ AND rudders $< 100$ , "Immediate" drop-out if throttle $> 310$ AND rudders $> 100$



FIGURE 40 SHEET 1

TABLE I. F-14 SOSTEL SIGNAL TRANSDUCERS

1 Table Item #	2 Signal Name/Function	3 Identifier Code	4 Signal Source Box Identification	5 Point of Origin	6 Transducer Type	7 Present Signal Characteristics	8 Associated Loads	9 Conventional Switches Being Replaced or Deleted	10 Operational Address	11 Reference Drawings	12 Associated Boolean Equation	13 Conditioning Technique
131	LEFT ENGINE - CRANK	KKS 131	EXT. ENVIRONMENT/ THROTTLE CONTROL PANEL (710A1) OR ENGINE CONTROL PANEL (710A1)	PILOTS LEFT SIDE CONSOLE STA 225	TOGGLE SWITCH DP/TCO	L. ENGINE CRANK = SWITCHED 28VDC OFF = OPEN	K9 - L. ENG. START A RELAY K7-L. ENL. START B RELAY (LEFT GLOVE RELAY BOX 772A1) K3-MISCELLANEOUS START A RELAY K16 - MISCELLANEOUS START B RELAY (RIGHT GLOVE RELAY BOX 772A1)	ENG. CRANK - L/R SWITCH S1	01P41	INSFD FIG. 40 ZONE 4A	211 214 213 212 225 226 227 228 229 230 231 232 553	SOLID STATE
132	RIGHT ENGINE - CRANK	KKS 132	EXT. ENVIRONMENT/ THROTTLE CONTROL PANEL (710A1) OR ENGINE CONTROL PANEL (710A1)	PILOTS LEFT SIDE CONSOLE STA 225	TOGGLE SWITCH DP/TCO (SAME AS ITEM 131)	R. ENGINE CRANK = SWITCHED 28VDC OFF = OPEN	K15 - R. ENGINE START A RELAY K9-R. ENGINE START B RELAY K3-MISCELLANEOUS START A RELAY K16 - MISCELLANEOUS START B RELAY (R. GLOVE RELAY BOX 772A1)	ENG. CRANK - L/R SWITCH S1	01P42	INSFD FIG. 40 ZONE 4A	211 214 213 212 224 226 228 229 230 231 233 553	SOLID STATE
133	LEFT ENGINE AUTO RESTART SWITCH-CLOSED	KKS 133	LEFT ENGINE- AUTOMATIC RESTART SWITCH	LEFT ENGINE PS 640	PRESSURE SWITCH	CLOSED-SWITCHED AND OPEN="OPEN"		N/A	06P32	INSFD FIG. ZONE 11B	211 214 213 212 226 227 229 230 553	RESISTOR DIVIDER ADAPTER

TABLE 1. P-14 SUGTEL SIGNAL TRANSDUCERS

1 Table Item #	2 Signal Name/Function	3 Identifier Code	4 Signal Source Box Identification	5 Point of Origin	6 Transducer Type	7 Present Signal Characteristic	8 Associated Loads	9 Conventional Switches Being Replaced or Deleted	10 Operational Address	11 Reference Drawings	12 Associated Boolean Equation	13 Conditioning Technique
134	RIGHT ENGINE AUTO RESTART SWITCH-CLOSED	KKS 134	RIGHT ENGINE AUTOMATIC RESTART SWITCH	RIGHT ENGINE PS 640	PRESSURE SWITCH	CLOSED-SWITCHED 20VDC OPEN = "OPEN"		N/A	07P33	INSFD FIG. 40 ZONE 11B	211 214 213 212 226 228 229 230 231 232 553	RESISTOR DIVIDER ADAPTER
135	LEFT ENGINE CUTOFF SWITCH-CLOSED	KKS 135	LEFT ENGINE STARTER	LEFT ENGINE PS 605	STARTER CENTRIFUGAL SWITCH	CLOSED (< 1/24 N <sub>2</sub> H/MIN) = SWITCHED OPEN (> 1/24 N <sub>2</sub> H/MIN) = "OPEN"	K9-L, ENGINE START A RELAY K7-L, ENGINE START B RELAY (L GLOVE RELAY BOX 772A1)	N/A	06P33	INSFD FIG. 40 ZONE 11A	211 214 213 212 226 228 229 230 231 232 553	RESISTOR DIVIDER ADAPTER
136	RIGHT ENGINE SWITCH-CLOSED	KKS 136	RIGHT ENGINE STARTER	RIGHT ENGINE PS 605	STARTER CENTRIFUGAL SWITCH	CLOSED (< 1/24 N <sub>2</sub> H/MIN) = SWITCHED OPEN (> 1/24 N <sub>2</sub> H/MIN) = "OPEN"	K15-R, ENGINE START A RELAY K9-R, ENGINE START B RELAY (R GLOVE RELAY BOX 772A1)	N/A	07P34	INSFD FIG. 40 ZONE 11A	211 214 213 212 226 228 229 230 231 232 553	RESISTOR DIVIDER ADAPTER

FIGURE 40 SHEET 3

TABLE I. F-14 SATEL SIGNAL TRANSDUCERS

1 Table Item #	2 Signal Name/Function	3 Identifier Code	4 Signal Source Box Identification	5 Point of Origin	6 Transducer Type	7 Present Signal Characteristics	8 Associated Loads	9 Conventional Switches Being Replaced or Deleted	10 Operational Address	11 Reference Drawings	12 Associated Boolean Equation	13 Conditioning Technique
154	AIR START - ON	KKS 154	EXT ENVIRONMENT/ THROTTLE CONTROL PANEL (710A1) AIR START SWITCH (58)	PILOTS LEFT SIDE CONSOLE FS 225	TOGGLE SWITCH 4 PBT	ON = OPEN NORMAL = SHORT	L. AND R. ENGINE IGNITION TERMINATION TRANSFORMER	AIR STARTER - ON/NO/44 SWITCH (58)	01P43	INSFD FIG. 40 ZONE 4B	227 228	SOLID STATE
155	RIGHT IGNITION SWITCH - 73°	KKS 155	THROTTLE QUADRANT (711A1)	PILOTS LEFT SIDE CONSOLE FS 225	LIMIT SWITCH	>3° = SWITCHED OPEN OR GND <3° = SWITCHED GND	R. ENGINE IGNITION CONTROL P/O IGNITION TERMINATION TRANSFORMER	N/A	01P44	INSFD FIG. 40 ZONE 7B	228	RESISTOR DIVIDER ADAPTER
156	LEFT IGNITION SWITCH - >3°	KKS 156	THROTTLE QUADRANT (711A1)	PILOTS LEFT SIDE CONSOLE FS 225	LIMIT SWITCH	>3° = SWITCHED OPEN OR GND <3° = SWITCHED GND	L. ENGINE IGNITION CONTROL P/O IGNITION TERMINATION TRANSFORMER	N/A	01P45	INSFD FIG. 40 ZONE 7C	227	RESISTOR DIVIDER ADAPTER
159	R. ENG. VALVE OPEN	EQS 159	R. ENG. PRESSURE REGULATOR VALVE POSITION SWITCH	RIGHT ENGINE STARTER FS 605	LIMIT SWITCH	OPEN = SWITCHED 28VDC CLOSED = "OPEN"	R OVSE/VALVE LAMP P/O PILOT CAUTION ADVISORY INDICATOR (69A1)	N/A	07P35	INSFD FIG. 40 ZONE 11A	229	RESISTOR DIVIDER ADAPTER
160	L. ENG. VALVE - OPEN	EQS 160	L. ENG. PRESSURE REGULATOR VALVE POSITION SWITCH	LEFT ENGINE STARTER FS 605	LIMIT SWITCH	OPEN = SWITCHED 28VDC CLOSED = "OPEN"	L OVSE/VALVE LAMP P/O PILOT CAUTION ADVISORY INDICATOR (69A1)	N/A	06P34	INSFD FIG. 40 ZONE 11A	230	RESISTOR DIVIDER ADAPTER

TABLE 1. F-14 SATEL SIGNAL TRANSDUCERS

FIGURE 10. SHEET 4

1 Table Item #	2 Signal Name/Function	3 Identifier Code	4 Signal Source Box Identification	5 Point of Origin	6 Transducer Type	7 Present Signal Characteristic	8 Associated Loads	9 Conventional Switches Being Replaced or Deleted	10 Operational Address	11 Reference Drawings	12 Associated Boolean Equation	13 Conditioning Technique
161	R. ENG. IDLE EXHAUST NOZZLE SOLENOID SWITCH-CLOSED (IDLE)	KJS 161	R. ENG. IDLE EXHAUST NOZZLE SOLENOID SWITCH P/O R. ENGINE FUEL PUMP	RIGHT ENGINE FUEL PUMP PS 600	LIMIT SWITCH	CLOSED (IDLE) = SWITCHED 28VDC OPEN (> IDLE) = "OPEN"	R. ENG. IDLE EXHAUST NOZZLE SOLENOID	N/A	OTF 36	INSFD FIG. 40 ZONE 5A, 3A NAVAIR 01- F14A-6 2-2-6 FIGURE 2	234	RESISTOR DIVIDER ADAPTER
162	L. ENG. IDLE EXHAUST NOZZLE SOLENOID SWITCH CLOSED (IDLE)	KJS 162	L. ENG. IDLE EXHAUST NOZZLE SOLENOID SWITCH P/O L. ENG. FUEL PUMP	LEFT ENGINE FUEL PUMP PS 600	LIMIT SWITCH	CLOSED (IDLE) SWITCHED 28VDC OPEN (> IDLE) = "OPEN"	L. ENG. IDLE EXHAUST SOLENOID	N/A	OFF 35	INSFD FIG. 40 ZONE 5A, 3A NAVAIR - 01-F14A-6 2-2-6 00500 FIGURE 2	235	RESISTOR DIVIDER ADAPTER

FIGURE 40 SHEET 1

TABLE II. F-14 SOLID STATE POWER CONTROLLERS AND DRIVERS

1	2	3	4	5	6	7	8	9	10	11	12
Table Item #	Type of Power Controller	Rating V & I	Associated Loads	Duty Cycle	Load Power Dissipation	P.C. Location	Conventional Devices Being Replaced	Operational Address	Identifier Code	Reference Drawings	Associated Boolean Equations
224	DC-1 POLE	V-28VDC	RIGHT ENGINE STARTER-PRESSURE REGULATOR SHUTOFF VALVE				K 15 R. ENG. START A (R. GLOVE RELAY BOX 772A1) CB4 (5A) ENG. START (36A3)	10Q08	KKL 224	INSFD FIG. 40 ZONE 12A, 5, 4, 3,	224
225	DC-1 POLE	V-28VDC	LEFT ENGINE STARTER-PRESSURE REGULATOR SHUTOFF VALVE				K9 L. ENG. START A (R. GLOVE RELAY BOX 772A1) CB4 (5A) ENG. START (36A3)	09Q09	KKL 225	INSFD FIG. 40 ZONE 3A, 4A, 8, 12A	225
226	DC-1 POLE	V-28VDC	SOLENOID BY PASS VALVE P/O CROSS BLEED ISOLATION BY PASS AND CHECK VALVE (72L1)				K3-MISCELLANEOUS START A	11Q22	KKL 246	INSFD FIG. 40 ZONE 12B, 5A, 3A	226
227	OPEN/GND DRIVER		IGNITION CONTROL-D P/O LEFT ENGINE-IGNITION TERMINATION TRANSFORMER				K9 L. ENG. START A (L. GLOVE RELAY BOX 773A1)	06D41	KKL 227	INSFD FIG. 40 ZONE 11B, 4B, 7C, 8A	227
228	OPEN/GND DRIVER		IGNITION CONTROL P/O RIGHT ENGINE-IGNITION TERMINATION TRANSFORMER				K15 R. ENG. START A (R. GLOVE RELAY BOX 772A1)	06D42	KKL 228	INSFD FIG. 40 ZONE 11B, 4B, 7B, 5B	228
229	LAMP DRIVER	V-28VDC	R. OVER/VALVE LAMP P/O PILOT CAUTION ADVISORY INDICATOR (69A1)				36L (5A) STARTER CONTR VALVE (36A2) P/O K16 MISC. START B (R. GLOVE RELAY BOX 772A1)	01D12	BIL 229	INSFD FIG. 40 ZONE 11A, 9A, 5B, 3B INSFD FIG. 38 ZONE 8B	229
230	LAMP DRIVER	V-28VDC	L. OVER/VALVE LAMP P/O PILOT CAUTION ADVISORY INDICATOR (69A1)				SAME AS ITEM 229	01D13	BIL 230	INSFD FIG. 40 ZONE 11A, 9B, 5B, 3B INSFD FIG. 38 ZONE 8C, 9A	
231	SHORT/OPEN		EXTERNAL AIRSTART RECEPTACLE				P/O K9 L. ENG. START A (L. GLOVE RELAY BOX 773A1) P/O K15 R. ENG. START A (R. GLOVE RELAY BOX 772A1)		KKL 231	INSFD FIG. 40 ZONE 8A, 5B DOC	231



TABLE II F-34 SOLID STATE POWER CONTROLLERS AND DRIVERS

1 Table Item #	2 Type of Power Controller	3 Rating V & I	4 Associated Loads	5 Duty Cycle	6 Load Power Dissipation	7 P.C. Location	8 Conventional Devices Being Replaced	9 Operational Address	10 Identifier Code	11 Reference Drawings	12 Associated Boolean Equations
232	DC-1 POLE	V-28VDC	LEFT ENG. EJECTOR REGULATING SHUTOFF VALVE (7342) P/O OIL COOLER EJECTOR SYSTEM				XB23 (5A) ENG. OIL X301 (36A2) P/O K7 L ENG. START B (L. GLOVE RELAY BOX 773A1) P/O K10 MIG SAFETY G (R. GLOVE RELAY BOX 772A1)	09Q10	KEL 232	INSPD FIG. 40 ZONE 5B, 3A NAVAIR 01- F14AAA-2-2-6 014000 FIGURE 2	232
233	DC-1 POLE	V-28VDC	RIGHT ENG. EJECTOR REGULATING SHUTOFF VALVE (7342) P/O OIL COOLER EJECTOR SYSTEM				XB23 (5A) ENG. OIL X301 (36A2) P/O K9 R ENG. START B P/O K10 MIG SAFETY G (R. GLOVE RELAY BOX 772A1)	10Q09	KEL 233	INSPD FIG. 40 ZONE 5C, 3A NAVAIR 01- F14AAA-2-2-6 014000 FIGURE 2	233
234	DC-1 POLE	V-28VDC	R. ENG. IDLE EXHAUST NOZZLE SOLENOID				XB4 (5A) ENG. START (36A3) P/O K10 MIG SAFETY G (R. GLOVE RELAY BOX 772A1)	09Q11	KEL 234	INSPD FIG. 40 ZONE 5A, 3A NAVAIR 01- F14AAA-2-2-6 008000 FIGURE 2	234
235	DC-1 POLE	V-28VDC	L. ENG. IDLE EXHAUST NOZZLE SOLENOID				XB4 (5A) ENG. START (36A3) P/O K10 MIG SAFETY G (R. GLOVE RELAY BOX 772A1)	10Q10	KEL 235	INSPD FIG. 40 ZONE 5A, 3A NAVAIR 01- F14AAA-2-2-6 008000 FIGURE 2	235

TABLE III. F-14 SUSTAIN BOOLEAN EQUATIONS

1 Table Item #	2 Boolean Equation	3 Transducer List Cross Reference	4 Solid State Controller List Cross Reference	5 Bus/Load Management Priority	6 Special Considerations	7 Reference Drawings	8 Equation Description & Notes
224	KKL 224 KKS 132 • KKS 136	132 136	224	2	ESS. NO. 2 BUS	INSPD FIG. 40 ZONE 3A, 4A, 5B 12A, 11A	RIGHT ENGINE PRESSURE REGULATOR SHUTOFF VALVE ENABLED (26VIC) (VALVE OPEN) = RIGHT ENGINE CHANK AND RIGHT ENGINE CUTOFF SWITCH-CLOSED
225	KKL 225 KKS 131 • KKS 135	131 135	223	2	ESS. NO. 2 BUS	INSPD FIG. 40 ZONE 3A, 4A, 5, 12A	LEFT ENGINE PRESSURE REGULATOR SHUTOFF VALVE ENABLED (26VIC) (VALVE OPEN) = LEFT ENGINE- CHANK AND LEFT ENGINE CUTOFF SWITCH-CLOSED
226	KKL 226 = KKS 131 • KKS 133 • KKS 135 + KKS 132 • KKS 134 • KKS 136	131 132 133 134 135 136	226	2	ESS. NO. 2 BUS	INSPD FIG. 40 ZONE 12B, 5, 8A, 4A, 1A	SOLENOID BY PASS VALVE (CROSS BLEED ENABLE) = LEFT ENGINE-CHANK AND AUTO RESTART SWITCH-CLOSED AND CUTOFF SWITCH-CLOSED ON RIGHT ENGINE-CHANK AND AUTO RESTART SWITCH-CLOSED AND CUTOFF SWITCH-CLOSED
227	KKL 227 = KKS 154 • (KKS 156 • KKS 131 • KKS 136) • (KKS 156 • KKS 133 • KKS 135) • KKS 133	131 132 133 135 136 154 156 159	227	2	ESS. NO. 2 BUS	INSPD FIG. 40 ZONE 11B, 4B 7C, 8A	LEFT ENGINE IGNITION CONTROL ENABLED (OPEN CNT. IGNITION ON) = AIR START SWITCH-ON OR LEFT IGNITION SWITCH- > 3° AND LEFT ENGINE-CHANK AND LEFT ENGINE CUTOFF SWITCH-CLOSED OR AIRSTART SWITCH-ON AND ENGINE CHANK-OFF OR LEFT ENGINE CUTOFF SWITCH-OPEN AND LEFT ENGINE AUTO RESTART SWITCH-OPEN
228	KKL 228 = KKS 154 • (KKS 155 • KKS 132 • KKS 136) • KKS 155 • (KKS 132 • KKS 136) • KKS 134	132 134 136 154 155	228	2	ESS. NO. 2 BUS	INSPD FIG. 40 ZONE 11B, 4B 7B, 5B	RIGHT ENGINE IGNITION CONTROL ENABLED (OPEN CNT. IGNITION ON) = AIR START SWITCH-ON OR RIGHT IGNITION SWITCH- > 3° AND RIGHT ENGINE-CHANK AND RIGHT ENGINE CUTOFF SWITCH-CLOSED OR AIR START SWITCH-ON AND ENGINE CHANK-OFF OR RIGHT ENGINE CUTOFF SWITCH-OPEN AND RIGHT ENGINE AUTO RESTART SWITCH-OPEN
229	RUL 229 = BUS 157 • KKS 159 • (KKS 131 • KKS 133 • KKS 135 • KKS 132 • KKS 134 • KKS 136)	131 132 133 134 135 136 157 159	229	2	ESS. NO. 2 BUS	INSPD FIG. 3B ZONE 8B, 9A, INSPD FIG. 40 ZONE 11A, 9A, 5B, 3B	R. ENG/VALVE - LAMP ON (26VIC) = RIGHT-OWSE OR R. ENG VALVE-OPEN AND L. ENGINE CHANK-OFF OR L. ENG. AUTO RESTART SWITCH-OPEN OR L. ENG. CUTOFF SWITCH-OPEN AND R. ENG. CHANK-OFF OR R. ENG. AUTO RESTART SWITCH-OPEN OR R. ENG. CUTOFF SWITCH-OPEN

TABLE III. F-14 SOLID STATE BOOLEAN EQUATIONS

1 Table Item #	2 Boolean Equation	3 Transducer List Cross Reference	4 Solid State Controller List Cross Reference	5 Bus/Load Management Priority	6 Special Considerations	7 Reference Drawings	8 Equation Description & Notes
230	EUL 230 = BUS 158 • BUS 160 • (KKS 131 • KKS 133 • KKS 135 • KKS 132 • KKS 134 • KKS 136)	131 132 133 134 135 136 158 160	230	2	ESS. NO. 2 BUS	INSPD FIG. 38 ZONE 5C, 5A INSPD FIG. 40 ZONE 11A, 9B, 5B, 3B	L. ENG. VALVE - LAMP ON (28VDC) = LEFT-OVER OR L. ENG. VALVE - OPEN AND L. ENG. CHAMK-OFF OR L. ENG. AUTO RESTART SWITCH - OPEN OR L. ENG. CUTOFF SWITCH-OPEN AND R. ENG. CHAMK-OFF OR R. ENG. AUTO RESTART SWITCH-OPEN OR R. ENG. CUTOFF SWITCH-OPEN
231	KEL 231 = KKS 131 • KKS 135 • KKS 132 • KKS 136	131 132 135 136	231	2	ESS. NO. 2 BUS	INSPD FIG. 38 ZONE 10C, 8A, 5B, 4A, 11A	EXTERNAL AIR START ENABLED (SHORT) = L. ENG. -CHAMK AND L. ENG. CUTOFF SWITCH CLOSED OR R. ENG. -CHAMK AND R. ENG. CUTOFF SWITCH CLOSED
232	KEL 232 = GUS 002 • GUS 102 • KKS 131 • KKS 135	002 102 131 135	232	2	ESS. NO. 2 BUS	INSPD FIG. 40 ZONE 5B, 3A NAVAIR 01 F14AAA-2-2-6 01400	L. ENG. EJECTOR REGULATING SHUTOFF VALVE- ENABLED (28VDC) = LEFT AND RIGHT M/G WEIGHT ON WHEELS AND L. ENG. CHAMK-OFF OR L. ENG. CUTOFF SWITCH-OPEN
233	KEL 233 = GUS 002 • GUS 102 • KKS 132 • KKS 136	002 102 132 136	233	2	ESS. NO. 2 BUS	INSPD FIG. 40 ZONE 5C, 3A NAVAIR 01- F14AAA-2-2-6 01400 FIGURE 2	R. ENG. EJECTOR REGULATING SHUTOFF VALVE-ENABLED (28VDC) = LEFT AND RIGHT M/G WEIGHT ON WHEELS AND R. ENG. CHAMK-OFF OR R. ENG. CUTOFF SWITCH-OPEN
234	EUL 234 = GUS 002 • GUS 102 • EJS 161	002 102 161	234	2	ESS. NO. 2 BUS	INSPD FIG. 40 ZONE 5A, 3A NAVAIR 01- F14AAA-2-2-6 00500 FIGURE 2	R. ENG. IDLE EXHAUST NOZZLE SOLENOID ENERGIZED (OPEN, 28VDC) = LEFT AND RIGHT M/G WEIGHT ON WHEELS AND RIGHT ENG. EXHAUST NOZZLE SOLENOID SWITCH-CLOSED (IDLE)
235	EUL 235 = GUS 002 • GUS 102 • EJS 102	002 102 162	235	2	ESS. NO. 2 BUS	INSPD FIG. 40 ZONE 5A, 3A NAVAIR 01- F14AAA-2-2-6 00500 FIGURE 2	L. ENG. IDLE EXHAUST NOZZLE SOLENOID ENERGIZED (OPEN, 28VDC) = LEFT AND RIGHT M/G WEIGHT ON WHEELS AND LEFT ENG. EXHAUST NOZZLE SOLENOID SWITCH-CLOSED (IDLE)

FIGURE 11. SHEET 1

TABLE II. F-14 SOLID STATE POWER CONTROLLERS AND DRIVERS

1 Table Item #	2 Type of Power Controller	3 Rating V & I	4 Associated Loads	5 Duty Cycle	6 Load Power Dissipation	7 P.C. Location	8 Conventional Devices Being Replaced	9 Operational Address	10 Identifier Code	11 Reference Drawings	12 Associated Boolean Equations
500	Solenoid Driver	V = +28 VDC	Refuel probe solenoid selector valve (6215) - SOL-A (ext all)				F/O Refuel Probe SA - Fuel mgt panel (707A1) F/O R8 Dump Relay - Left glove relay box (773A1) CRK (7.5A) fuel mgt panel - 2DC bus circuit breaker panel (36A3)	0Aq16	QAL 500	INSPD Fig. 41 Zone 8C, 3A, 2B, 1B	500
501	Solenoid Driver	V = +28 VDC	Refuel Probe solenoid selector valve (6215) SOL-A (Ext-Push)				F/O Refuel probe SA - Fuel Mgt panel (707A1) CRK (7.5A) Fuel P/motive flow 150L V-2 DC circuit breaker panel (36A3)	0Aq17	QAL 501	INSPD Fig. 41 Zone 8C, 3A, 1A	501
502	Solenoid Driver	V = +28 VDC	Refuel Probe solenoid selector valve (6215) - SOL-B				F/O Probe door switch (62B1) F/O Refuel Probe SA - Fuel mgt panel (707A1) CRK (7.5A) fuel P/motive flow 150L V-2 DC circuit breaker panel (36A3)	0Aq18	QAL 502	INSPD Fig. 41 Zone 8C, 8B, 3A, 1A	502
503	Solenoid Driver	V = +28 VDC	Refuel Probe solenoid selector valve (6215) - SOL-C				F/O R1 M/G handle C relay - left glove relay box (773A1)	0Aq19	QAL 503	INSPD Fig. 41 Zone 8C, 2A, 1A	503
504	Lamp Driver	V = +28 VDC	Master Test Panel (73A1) - G/H/O GO Lamps F.O Pilot caution advisory indicator (69A1)				F/O Master Test Panel (73A1) CRK (3A) Master Test - 10 DC main circuit breaker panel (36A4)	01D14	MIL 504	INSPD Fig. 41 zone 2C, 1C	504

TABLE III P-14 SOLAR BOILER EQUATIONS

1 Table Item #	2 Boolean Equation	3 Transducer List Cross Reference	4 Solid State Controller List Cross Reference	5 Bus/Load Management Priority	6 Special Considerations	7 Reference Drawings	8 Equation Description & Notes
500	$QAL500 = QES173$ $\bullet \frac{[QAS165 \cdot QNS002 + QES102] \cdot EFS103}{QES102}$	002 102 163 165 173	500	1	ESS, No. 1 bus	WSPD Fig. 41 Zone 8C, 3A, 2B, 1B	Refuel probe solenoid selector valve (621B) - SOL-A (ext all) = refuel probe switch SH-11/extd AND Dump - not on AND refuel probe switch SH-11/extd AND System pressure - > 450 psi not AND 28VDC ESS DC No. 1 & 2 bus on.
501	$QAL501 = QES172$	172	501	1	ESS, No. 1 Bus	WSPD Fig. 41 Zone 8C, 3A, 1A	Refuel probe solenoid selector valve (621B) - SOL A (ext-04a) = refuel probe switch SH - fuu/extd AND 28VDC No. 1 & 2 bus ON.
502	$QAL502 = QES120 \bullet$ $\bullet [(QES172) \cdot (QES173)]$	120 172 173	502	1	ESS, No. 1 Bus	WSPD Fig. 41 Zone 8C, 8B, 3A, 1A	Refuel probe solenoid selector valve (621B) - SOL B = Inflight refueling probe door - open AND refuel probe - fuu/extd not AND refuel probe - all/extd not AND 28VDC ESS DC No. 1 & 2 bus on
503	$QAL503 = QES022$	022	503	1	ESS, No. 1 Bus	WSPD Fig. 41 Zone 8C, 2A, 1A	Refuel probe solenoid selector valve (621B) - SOL C = Landing Gear - up AND 28VDC ESS DC No. 1 & 2 bus on
504	$MIL504 = LAS073 \bullet$ MIS065	068 073	504	3	L, Main Bus	WSPD Fig. 41 Zone 2C, 1C	Master test panel (73A1) GO/NO GO lamps on - lamp test position AND test selector depressed AND 28VDC L main bus on



FIGURE 42 SHEET 1

TABLE I F-14 SUSTEL SIGNAL TRANSDUCERS

1	2	3	4	5	6	7	8	9	10	11	12	13
Table Item #	Signal Name/Function	Identifier Code	Signal Source Box Identification	Point of Origin	Transducer Type	Present Signal Characteristics	Associated Loads	Conventional Switches Being Replaced or Deleted	Operational Address	Reference Drawings	Associated Boolean Equation	Conditioning Technique
164	Speed brake - retracted	QUS164	Speed Brake switch (76S1) P/O Speed Brake control system	Aft PS750	Limit switch	Retracted = switched 28VDC Open = "Open"	Fuel dump solenoid shut-off (fuel cell No. 5) (6212)	Speed Brake switch (76S1)	06P36	INSFD Fig. 42 Zone 7A	237	Solid state
165	Dump - on	QAS165	Fuel Management Panel (707A1)	Pilots left vertical control console PS225	Toggle switch (SPST)	Dump-on = switched 28VDC Off = open	Fuel Dump Solenoid shut-off (fuel cell No. 5) (6212)	Dump-switch	01P46	INSFD Fig. 42 Zone 5A	237 242 244 277 243 500	Solid state
166	Fuel Feed - Aft	QAS166	Fuel Management Panel (707A1)	Pilots left vertical control console PS225	Toggle switch (DPDTCO)	Aft = switched 28VDC Norm = open	a) Feed tank interconnect solenoid valve (fuel cell No. 3) (6215) b) K31 feed tank interlock relay (left glove relay box 773A1)	Fuel feed - SE switch	01P47	INSFD Fig. 42 Zone 5A	238 239 240 241 242	Solid state
167	Fuel Feed - Fwd	QAS167	Fuel Management Panel (707A1)	Pilots left vertical control console PS225	Toggle switch (DPDTCO)	Fwd = switched 28 VDC Norm = open	Same as item 166	Fuel Feed - SE switch	01P48	INSFD Fig. 42 Zone 5A	238 239 240 241 242	Solid state
168	Fuel Cell 2 or 5 - Dry	EUS168	Electronic control amplifier (33A16)	Right side PS400	N/A (relay contacts)	Dry = switched 28VDC Wet = Open	K61 tank interconnect override relay (L glove relay box 773A1)	N/A	04P17	INSFD Fig. 42 Zone 11A	238 239 240 241 242 243	Resistor Divider Adapter

FIGURE 42 SHEET 2

TABLE I. F-14 SUSTAINMENT SIGNAL TRANSDUCERS

1 Table Item #	2 Signal Name/Function	3 Identifier Code	4 Signal Source Box Identification	5 Point of Origin	6 Transducer Type	7 Present Signal Characteristics	8 Associated Loads	9 Conventional Switches Being Replaced or Deleted	10 Operational Address	11 Reference Drawings	12 Associated Boolean Equation	13 Conditioning Technique
169	Right fuel pressure switch - closed	ERS169	Right fuel pressure switch (6254)	FS600	Pressure switch	Closed = switch- ed 28VDC Open = "open"	K80 - Cross feed per re- lay K81 - Aft forward fuel feed relay (L. glove relay box 773A1) R. Fuel press lamp	Right fuel pressure switch (6254)	07F37	IWSFD Fig. 42 Zone 1B	240 241 243 249 251	Solid state
170	Left fuel pressure switch - clos- ed	ERS170	Left fuel pressure switch (6253)	FS600	Pressure switch	Closed = switch- ed 28VDC Open = "open"	K80 - cross feed per relay K81 - Aft forward feed relay (left glove relay box 773A1) L. Fuel press lamp P/O pilot caution ad- visory indi- cator panel (69A1)	Left fuel pressure switch (6253)	06F37	IWSFD Fig. 42 Zone 1B	240 241 243 249 251	Solid state

TABLE I. F-14 SATEL SIGNAL TRANSFERS

1 Table Item #	2 Signal Name/Function	3 Identifier Code	4 Signal Source Box Identification	5 Point of Origin	6 Transducer Type	7 Present Signal Characteristics	8 Associated Loads	9 Conventional Switches Being Replaced or Deleted	10 Operational Address	11 Reference Drawings	12 Associated Boolean Equation	13 Conditioning Technique
171	Wing/Ext trans- fer	QES171	Wing external trans- fer switch S3 P/O fuel management panel (707A1)	Pilot's left ver- tical con- sole FS225	Toggle switch (DTRC - manual - sol- enoid driven)	Off = switched 28VDC Off Not = open	Crossfeed solenoid valve (cell No. 2) (62110) Wing motive flow solen- oid transfer valve (cell No. 2) (62111)	Wing external trans- fer switch S3	01P49	IWSFD Fig. 42 Zone 5B	244 277	Solid state
172	Refuel probe Fus/Ext	QES172	Fuel management panel (707A1) switch S4	Pilot's left ver- tical con- sole FS225	Toggle switch (DTRC)	Fus/Ext = Switched 28VDC Open	N/A	Refuel probe switch S4	01P50	IWSFD Fig. 42 Zone 5C	244 277 501 502	Solid state
173	Refuel probe - All/Ext	QES173	Fuel management panel (707A1) switch S4	Pilot's left ver- tical con- sole FS225	Toggle switch (DTRC)	All/Ext = switched 28VDC Open	See Item 171	Refuel probe switch - S4	01P51	IWSFD Fig. 42 Zone 5C	277 500 502	Solid state
174	Master Test - Flt. Gr. Up.	DOS174	Master Test Panel (730A1)	Pilot's Right side console FS225	12 position rotary switch with Depress test function	Flt Gr Up = switched 28VDC Flt Gr Up Not = Open	K26 - Exter- nal tank test relay		02P45	IWSFD Fig. 42 Zone 1B	244 299 260 261 243 562 578 579	
175	Right fuel low caution advi- sory	EES175	R. electronic con- trol amplifier (33A2)	Right side FS395	Relay con- tact switch- ing	Low = switched 28VDC (No. 2 cell & R. box beam cell - Low) Low Not = Open	a) Pilot's - R fuel low lamp P/O Pilots caution ad- visory indi- cator panel (69A1)	N/A	04P18	IWSFD Fig. 42 Zone 13B	246 246	Resistor Adapter Divider

FIGURE 42 SHEET 4

TABLE I. F-14 SOMETEL SIGNAL TRANSDUCERS

1 Table Item #	2 Signal Name/function	3 Identifier Code	4 Signal Source Box Identification	5 Point of Origin	6 Transducer Type	7 Present Signal Characteristics	8 Associated Loads	9 Conventional Switches Being Replaced or Deleted	10 Operational Address	11 Reference Drawings	12 Associated Boolean Equation	13 Conditioning Technique
175 (cont'd)							b) NFO - Fuel low P/O NFO's caution ad- visory indi- cator panel (69A2A1)					
176	Left Fuel Low caution advis- ory	E4S176	1. electronic con- trol amplifier (3344)	Right side PS290	Relay contact switching	Low = switched 28VDC (No. 5 cell and L. box beam cell - low)  Low Not = open	a) Pilot's - 1. Fuel low lamp  P/O Pilots caution ad- visory indi- cator panel (69A1)  b) NFO - fuel low P/O NFO's caution ad- visory indi- cator panel (69A2A1)	N/A	Q4P19	INSPD Fig. 4 Zone 138	246 247	Resistor Divider Adapter
177	Bingo	E4S177	Pilot fuel quantity Indicator (3344)	Pilots Right knee panel PS225	Relay contact switching	Bingo = switched 28VDC  Bingo Not = open	Pilot's Bingo - caution lamp  P/O pilots caution ad- visory indi- cator panel (69A1)	N/A	Q2P46	INSPD Fig. 4 Zone 16	252	Resistor Divider Adapter
178	Quantity sel- ect - Ext	E4S178	Quantity select switch - S5 F/O Fuel management panel (707A1)	Pilot's left verti- cal con- sole PS225	Rock switch (DPDTCO spring load- ed center return)	Ext = Switched 28VDC  Ext. Not = Open	Signal data converter (33A1)	Quantity select switch - S5	Q2P47	INSPD Fig. 42 Zone 5C	257 258	Solid state

FIGURE 12 SHEET 5

TABLE I F-14 SOLAR SIGNAL TRANSDUCERS

1 Table Item #	2 Signal Name/Function	3 Identifier Code	4 Signal Source Box Identification	5 Point of Origin	6 Transducer Type	7 Present Signal Characteristics	8 Associated Loads	9 Conventional Switches Being Replaced or Deleted	10 Operational Address	11 Reference Drawings	12 Associated Boolean Equation	13 Conditioning Technique
179	Quantity Select - wing	EJS179	Quantity select switch - S5 F/O Fuel Management Panel (TOTAL)	Pilot's left ver- tical con- tact FS225	Rocker Switch (DPDT) con- tact spring load- ed center return	Wing - switched 28VDC Wing not - open	Signal data converter (33A1)	Quantity select switch - S5	01P52	INSPD Fig. 42 Zone 5C	256 257	Solid state
188	Wing/Ext Trans- Oride	QAS188	Wing external trans- fer Switch - S3 F/O Fuel Management panel (TOTAL)	Pilot's left ver- tical con- tact FS225	Toggle switch (DPDT) con- tact Manual solenoid old driven	Oride - switched 28VDC Oride Not - Open	Wing motive flow solenoid transfer valve (cell No. 2) (62L1)	Wing external trans- fer switch - S3	01P53	INSPD Fig. 42 Zone 5B	277 244	Solid state
189	Wing/Ext Trans- - Auto	QAS189	Wing External Transfer Switch - S3 F/O Fuel Management panel (TOTAL)	Pilot's left ver- tical con- tact FS225	Toggle switch (DPDT) con- tact Manual solenoid old driven	Auto - Switched 28VDC Auto Not - open	Wing motive flow solenoid transfer valve (cell No. 2) (62L1)	Wing external trans- fer switch - S3	01P54	INSPD Fig. 42 Zone 5B	277 244	Solid state
190	L and R Wing Low Level Sen- sors - Wet	EJS190	Electronic control amplifier (62A10)	Right side FS300	Relay con- tacts	Wet - Switched 28VDC Dry - open	K83 - R & L Wing trans- fer relay (L. glove relay box 773A1)	N/A	04P20	INSPD Fig. 42 Zone 14C	277	Resistor Divider Adapter



FIGURE 42 SHEET 1

TABLE II F-14 SOLID STATE POWER CONTROLLERS AND DRIVERS

1 Table Item #	2 Type of Power Controller	3 Rating V & I	4 Associated Loads	5 Duty Cycle	6 Load Power Dissipation	7 P.C. Location	8 Conventional Devices Being Replaced	9 Operational Address	10 Identifier Code	11 Reference Drawings	12 Associated Boolean Equations
236	AC - 1 Pole	V=115VAC I = 5A	Signal Data Converter (33A1)	100%			CB34(5A) Fuel Qty Ind AC (36A2)	05Q02	E11236	1WSFD Fig. 42 Zone 15A, 1A	236
237	DC - 1 Pole	V=28VDC	Fuel Dump Solenoid Shut-off Pilot valve (Fuel cell No. 5) (6212)				CB34(7.5A) Fuel/Feed Dump (36A3) P/O K20 MLC safety M P/O K88 Nose Kneel (Left glove relay box 773A1)	08Q50	QAL237	1WSFD Fig. 42 Zone 7B, 7A 4A, 5A, A1	237
238	DC - 1 Pole	V=28VDC	Feed Tank Interconnect Solenoid Valve (Fuel Cell No. 3) (6215)				CB34(7.5) Fuel/Feed Dump (36A3) P/O K61 Tank Interconnect Override Relay (Left glove relay box 773A1)	08Q51	QAL 238	1WSFD Fig. 42 Zone 6A, 6B 3A, 1B	238
239	DC - 1 Pole	V=28VDC I=5A	a) Right vent solenoid valve (62111) b) Left vent solenoid valve (62112)				CB36(5A) Fuel vent valve (36A2) P/O K31 Feed Tank Interlock relay (Left glove relay box 773A1)	08Q52	QAL 239	1WSFD Fig. 42 Zone 7C, 7B, 3A, 1C	239
240	DC - 1 Pole	V=28VDC	Pressure motive flow solenoid transfer valve forward (cell No. 2) (621A)				CB34(7.5A) Fuel feed dump (36A3) P/O K31 - Feed tank interlock relay P/O K81 - Aft forward fuel feed relay P/O K80 - Cross feed power relay (i. glove relay box 773A1) CB36(3A) Fuel pressure advisory (36A2)	08Q53	QAL240	1WSFD Fig. 42 Zone 6B, 5B 3A, 2A, 1B 1C	240

TABLE II. F-14 SOLID STATE POWER CONTROLLERS AND DRIVERS

1 Table Item #	2 Type of Power Controller	3 Rating V & I	4 Associated Loads	5 Duty Cycle	6 Load Power Dissipation	7 P.C. Location	8 Conventional Devices Being Replaced	9 Operational Address	10 Identifier Code	11 Reference Drawings	12 Associated Boolean Equations
241	DC - 1 Pole	V=28VDC	Pneumatic motive flow solenoid transfer valve aft (cell No. 5) (6213)				CB3 (7.5A) Fuel feed Dump (36A3) P/O K31 - Feed tank interlock relay P/O K81 - Aft forward fuel feed relay P/O K80 - Crossfeed power relay (L. glove relay box 773A1) CB3 (3A) Fuel pressure advisory (36A2)	08Q54	QAL241	IMSFD Fig. 4-2 Zone 6B, 5B, 3A, 2A, 1B, 1C	241
242	DC - 1 Pole	V=28VDC	Motive flow isolation Valve (fuel cell No. 2) (6219)				P/O K31 - Feed tank in- terlock relay (L. glove relay box 773A1) CB6 (7.5A) Fuel P/ Motive Flow Isolation V (36A3) P/O K61 - Tank Inter- connect override relay P/O K8 - Dump relay (L. glove relay box 773A1) CB2 (7.5A) Fuel manage- ment panel (36A3) P/O K60 - Cross feed Pwr relay P/O K61 - Tank Inter- connect override relay (L. glove relay box 773A1)	08Q55	QAL242	IMSFD Fig. 4-2 Zone 3C, 3A, 1B	242
243	DC - 1 Pole	V=28VDC	Auxiliary fuel tank Pressure regulator (6216)					09Q12	QAL243	IMSFD Fig. 4-2 Zone 3C, 3A, 2A, 1B	243

FIGURE 42 SHEET 3

TABLE II P-34 SOLID STATE POWER CONTROLLERS AND DRIVERS

1 Table Item #	2 Type of Power Controller	3 Rating V & I	4 Associated Loads	5 Duty Cycle	6 Load Power Dissipation	7 P.C. Location	8 Conventional Devices Being Replaced	9 Operational Address	10 Identifier Code	11 Reference Drawings	12 Associated Boolean Equations
243 (cont'd)							P/O K26 Ext. Tank Test Relay - L. Glove relay box (773A1)			INSPD Fig. 41 Zone 7B, 6B, 2B, 1B	
244	DC - 1 Pole	V=28VDC	Crossfeed Solenoid Shutoff Pilot Valve (62110)				P/O K8 Dump Relay - L. Glove relay box (773A1)	08Q56	QAL244	INSPD Fig. 42 Zone 3B, 2A, 5B, 5C, 3A, 1B	244
245	DC - 1 Pole	V=28VDC I=5A	a) R. Electronic control amplifier (33A2) b) L. Electronic control amplifier (33A4)	100%			CB3 (7.5A) Fuel Manage- ment Panel (36A3) P/O K29 - M/G Safety N (R. glove relay box 772A1) P/O K8 - Dump relay (L. glove relay box 773A1)	09Q03	EIL245	INSPD Fig. 42 Zone 13, 1C	245
246	Lamp Driver	V=28VDC	NFO's - Fuel Low Lamp P/O NFO's caution advisory indicator panel (69A2A1)				CB14 (5A) Fuel low caution (36A2) CB13 (5A) Oxygen/bingo caution (36A2)	01D15	EIL246	INSPD Fig. 42 Zone 1C, 13 16C	246

TABLE II. F-14 SOLID STATE POWER CONTROLLERS AND DRIVERS

1 Table Item #	2 Type of Power Controller	3 Setting V & I	4 Associated Loads	5 Duty Cycle	6 Load Power Dissipation	7 P.C. Location	8 Conventional Devices Being Replaced	9 Operational Address	10 Identifier Code	11 Reference Drawings	12 Associated Boolean Equations
247	Lamp Driver	V=28VDC	Pilot's - L. Fuel Low - Lamp P/O Pilot's caution advisory indicator panel (69A1)				CB13 (5A) Oxygen/Bingo caution (36d2)	01D16	EJL247	INSPD Fig. 42 Zone 1C, 13 16A	247
248	Lamp Driver	V=28VDC	Pilot's - R. Fuel Low - Lamp P/O Pilot's caution advisory indicator panel (69A1)				CB13 (5A) Oxygen/Bingo caution (36d2)	01D17	EJL248	INSPD Fig. 42 Zone 1C, 13, 16A	248
249	Lamp Driver	V=28VDC	Pilot's - R. Fuel press - Lamp P/O Pilot's caution advisory indicator panel (69A1)				CB45 (3A) R. Oil pres- sure advisory (36d2)	01D18	ERL249	INSPD Fig. 42 Zone 1, 16	249
250	Lamp Driver	V=28VDC	Pilots - L. Fuel press - Lamp P/O Pilot's caution advisory indicator panel (69A1)				CB8 (3A) L. Oil pres- sure advisory (36d2)	01D19	ERL250	INSPD Fig. 42 Zone 1, 16	250
251	Lamp Driver	V=28VDC	Pilot's - Fuel Press - Lamp P/O Pilots caution advisory indicator panel (69A1)				CB45 (3A) R. Fuel pres- sure advisory (36d2) CB8 (3A) L. Fuel pres- sure advisory (36d2)	01D20	ERL251	INSPD Fig. 42 Zone 1, 16	251
252	Lamp Driver	V=28VDC	Pilot's - Bingo - Lamp P/O Pilot's caution advisory indicator panel (69A1)				CB13 (5A) oxygen/Bingo caution (36d2)	01D21	EJL252	INSPD Fig. 42 Zone 2C, 16A	252

TABLE II P-14 SOLID STATE POWER CONTROLLERS AND DRIVERS

1	2	3	4	5	6	7	8	9	10	11	12
Table Item #	Type of Power Controller	Rating V & I	Associated Loads	Duty Cycle	Load Power Dissipation	P.C. Location	Conventional Devices Being Replaced	Operational Address	Identifier Code	Reference Drawings	Associated Boolean Equations
253	DC - 1 Pole	V=28VDC	Electronic Control Amplifier (62A10)	100%			CB2 (7.5A) Fuel Management Panel (36A3)	05Q04	EJL253	INSFD Fig. 42 Zone 13C, 1B	253
254	DC - 1 Pole	V=28VDC	Electronic Control Amplifier (33A18)	100%			CB53(5A) Fuel Transfer Override (36A2)	05Q05	EJL254	INSFD Fig. 42 Zone 13A, 1B	254
255	DC - 1 Pole	V=28VDC	Signal Data Converter (28VDC Bit Test)	100%			CB25 (3A) Fuel Quantity Indicator DC (36A2)	05Q06	EJL255	INSFD Fig. 42 Zone 14B, 1C	255
256	Enable Signal	V=28VDC	Signal Data Converter (4G Select switch)				CB25 (3A) Fuel Quantity Indicator DC (36A2)	06D06	EJL256	INSFD Fig. 42 Zone 14A, 5C 1B	256
257	Enable Signal	V=28VDC	Signal Data Converter (Feed Select Switch)				CB25 (3A) Fuel Quantity Indicator DC (36A2)	06D07	EJL257	INSFD Fig. 42 Zone 14A, 5C 1B	257
258	Enable Signal	V=28VDC	Signal Data Converter (Feed Select switch)				CB25 (3A) Fuel Quantity Indicator DC (36A2)	06D08	EJL258	INSFD Fig. 42 Zone 14A, 5C 1B	258
259	DC - 1 Pole	V=28VDC	Signal Data Converter (28VDC Instrument test fuel)				CB11 (3A) Master Test (36A4)	05Q07	EJL259	INSFD Fig. 42 Zone 14B, 2C 1A	259
260	GND/OPEN Driver		Left electronic control amplifier (33A4) (fuel low level test - GND = Test Enable)				CB11 (3A) Master Test (36A4)	06D09	EJL260	INSFD Fig. 42 Zone 13B, 3A 3C, 1A	260
261	GND/OPEN Driver		Right electronic control amplifier (33A2) (fuel low level test - GND = test enable)				CB11 (3A) Master Test (36A4) P/O R33 - fuel low level test relay (L. glove relay box 773A1)	06D10	EJL261	INSFD Fig. 42 Zone 13A, 3A 3C, 1A	261



TABLE II. P-14 SOLID STATE POWER CONTROLLERS AND DRIVERS

1 Table Item #	2 Type of Power Controller	3 Rating V & I	4 Associated Loads	5 Duty Cycle	6 Load Power Dissipation	7 P.C. Location	8 Conventional Devices Being Replaced	9 Operational Address	10 Identifier Code	11 Reference Drawings	12 Associated Boolean Equations
277	DC - 1 Pole	V=28VDC	Wing motive flow solenoid transfer valve				CE2 (7.5A) Fuel manage- ment Panel (30A3) P/O KB - Dump relay K83 - R/L Wing trans- fer relay (left glove relay box 773A1)	08057	QA1277	INSTR Fig. 1-2 Zone 1B, 4A 5B, 5C, 6C 14A	277

TABLE III F-14 SCOTEL BOEYAN EQUATIONS

1 Table Item #	2 Boolean Equation	3 Transducer List Cross Reference	4 Solid State Controller List Cross Reference	5 Bus/Load Management Priority	6 Special Considerations	7 Reference Drawings	8 Equation Description & Notes
236	EQ1236	N/A	236	2	Instrument Bus	WSPD Fig. 42 Zone 15A, 1A	Signal data converter 115VAC $\Phi$ B = 115VAC $\Phi$ B Inst. bus energized
237	$QAS165 \bullet$ $(QDS002 \bullet + QDS102) \bullet$ $\bullet (QDS164 \bullet + EFS163)$	002 102 163 164 165	237	2	ESS, No. 2 Bus	WSPD Fig. 42 Zone 7B, 7A, 5A 4A, 1B	Fuel dump solenoid pilot valve - energized (26VDC) - Dump-on AND left OR right M.G. weight not on wheels AND speed brake-retracted OR combined system pres- sure - < 450 psi
238	$QAS166 \bullet$ $QAS167 \bullet + EFS168$	166 167 168	238	2	ESS, No. 2 Bus	WSPD Fig. 42 Zone 6A, 5B 14B, 3A, 1B	Feed tank interconnect solenoid valve (fuel cell No. 3) - energized (26VDC) = fuel feed - ART OR PMD OR fuel cell 2 or 5 - Dry
239	$QAS169 \bullet$ $QAS167 \bullet + EFS168$	166 167 168	239	2	ESS, No. 2 Bus	WSPD Fig. 42 Zone 7C, 7B, 3A 5B, 14B	Right and left vent solenoid valves - energized (26VDC) = fuel feed - ART OR PMD OR fuel cell 2 or 5 Dry
240	$QAS166 \bullet$ $QAS167 \bullet + EFS168$ $\bullet (EFS169 \bullet + EFS170)$	166 167 168 169 170	240	2	ESS, No. 2 Bus	WSPD Fig. 42 Zone 6B, 5B, 3A, 2A, 1B	Fuelage motive flow solenoid transfer valve forward (cell No. 2) - energized = fuel feed-art OR fuel feed- normal (art-off and PMD-off) AND fuel cell 2 and 5- normal (art-off and PMD-off) AND fuel cell 2 and 5- wet AND right OR left fuel pressure switch - closed
241	$QAS167 \bullet$ $QAS166 \bullet + EFS168$ $\bullet (EFS169 \bullet + EFS170)$	166 167 168 169 170	241	2	ESS, No. 2 Bus	WSPD Fig. 42 Zone 6B, 5B, 3A 2A, 1B, 1C	Fuelage motive flow solenoid transfer valve aft (cell No. 5) - energized (closed) = fuel feed - PMD OR fuel feed - normal (PMD-off and ART - off) AND fuel cell 2 and 5 - wet AND right fuel pressure switch - open AND left fuel pressure switch - closed
242	$QAS166 \bullet$ $QAS167 \bullet + EFS168$ $\bullet (QAS165 \bullet + EFS163) \bullet$ $(QDS002 \bullet + QDS102)$	002 102 166 167 168 169	242	2	ESS, No. 2 Bus	WSPD Fig. 42 Zone 3C, 3A, 1B	Motive flow isolation valve solenoid (fuel cell No. 2) - energized (closed) = fuel feed - ART OR PMD OR fuel cell 2 or 5 - dry OR dump-on AND combined system pressure - < 450 psi AND left OR right M.G. - weight on wheels not

TABLE III F-14 BOOSTER BOOLEAN EQUATIONS

1 Table Item #	2 Boolean Equation	3 Transducer List Cross Reference	4 Solid State Controller List Cross Reference	5 Bus/Load Management Priority	6 Special Considerations	7 Reference Drawings	8 Equation Description & Notes
243	$QAL243 = EHS169 + EHS170 + EHS168 + QAS165 + EHS163 + QAS002 + QAS102 + EHS174 + EHS068$	168 169 170 165 163 002 102 174 068	243	2	ESS, No. 2 Bus	INSPD Fig. 42 Zone 3C, 3A, 2A, 1B	Auxiliary fuel tank press regulator - Energized (28VDC) - right OR left fuel pressure switch - closed OR fuel cell 2 or 5 - dry OR (dump-off OR comb aya pressure - > 450 PSI OR L AND R - MW) AND Master test - fit gr up AND test selector - depressed
244	$QAL244 = [QAS165 + EHS163 + (QAS002 + QAS102)] \cdot [EHS174 + EHS068 + QAS002 + QAS102] + (QAS092 + QAS189 + QAS188) + (QAS171 + QAS172) + (QAS171 + QAS172)$	002 092 068 102 163 165 171 172 174 188 189	244	2	ESS, No. 2 Bus	INSPD Fig. 42 Zone 3B, 2A, 5B, 5C, 3A, 1B	Crossfeed solenoid shutoff pilot valve - energized (28VDC) - [dump-off OR combined aya. press - < 450 psi OR (Left AND right M.G. - weight on wheels) AND ((master test - fit gr up not OR master test - not depressed OR left OR right M.G. - weight on wheels not) AND (landing gear handle - down AND wing/ext trans-auto) OR wing/ext trans-oride] OR (wing/ext trans-off AND refuel probe - fus/extid)]
245	$EJL245$	N/A	245	2	ESS, No. 2 Bus	INSPD Fig. 42 Zone 13, 1C	28VDC fuel low caution to the R. and L. electronic control amplifier's (33A2 & 33A4) - 28VDC ESS, No. 2 Bus energized
246	$EJL246 = EJS175 + EJS176$	175 176	246	2	ESS, No. 2 Bus	INSPD Fig. 42 Zone 1C, 13 16C	WFO's - low fuel - caution lamp on (28VDC) - cell No. 2 and R. box beam cell - low AND cell No. 5 and L. box beam cell - low
247	$EJL247 = EJS176$	176	247	2	ESS, No. 2 Bus	INSPD Fig. 42 Zone 1C, 13 16A	Pilot's - L. fuel low - caution lamp on (28VDC) - cell No. 5 and L. box beam cell - low
248	$EJL248 = EJS175$	175	248	2	ESS, No. 2 Bus	INSPD Fig. 42 Zone 1C, 13 16A	Pilot's - R. fuel low - caution lamp on (28VDC) - cell No. 2 and R. box beam cell - low
249	$ENL249 = EHS169$	169	249	2	ESS, No. 2 Bus	INSPD Fig. 42 Zone 1, 16	Pilot's - R. fuel press - caution lamp on (28VDC) - R. fuel pressure switch - closed

TABLE III F-14 BOOSTER BOOLEAN EQUATIONS

1 Table Item #	2 Boolean Equation	3 Transducer List Cross Reference	4 Solid State Controller List Cross Reference	5 Bus/Load Management Priority	6 Special Considerations	7 Reference Drawings	8 Equation Description & Notes
250	ERI250 = ERS170	170	250	2	ESS, No. 2 Bus	INSPD Fig. 42 Zone 1, 16	Pilot's - L. Fuel. Press - caution lamp on (28VDC) = L. fuel pressure switch - closed
251	ERI251 = ERS169 + ERS170	169 170	251	2	ESS, No. 2 Bus	INSPD Fig. 42 Zone 1, 16	Pilot's - fuel press. - caution lamp on (28VDC) = right OR left fuel pressure switch - closed
252	EJL252 = EJS177	177	252	2	ESS, No. 2 Bus	INSPD Fig. 42 Zone 14A, 1C	Pilot's - bingo - caution lamp on (28VDC) = bingo
253	EJL253	N/A	253	2	ESS, No. 2 Bus	INSPD Fig. 42 Zone 13C, 1B	28VDC to the electronic control amplifier (22A10) = 28VDC ESS, Bus No. 2 energized
254	EJL254	N/A	254	2	ESS, No. 2 Bus	INSPD Fig. 42 Zone 13A, 1B	28VDC to the electronic control amplifier (33A18) = 28VDC ESS, Bus No. 2 energized
255	EJL255	N/A	255	2	ESS, No. 2 Bus	INSPD Fig. 42 Zone 14B, 1C	28VDC to the signal data converter (20VDC Bit test) = 28VDC ESS, Bus No. 2 energized
256	EJL256 = EJS179	179	256	2	ESS, No. 2 Bus	INSPD Fig. 42 Zone 14A, 5C 1B	Wing select switch (28VDC) = quantity select - wing
257	EJL257 = EJS178 + EJS 179	178 179	257	2	ESS, No. 2 Bus	INSPD Fig. 42 Zone 14A, 5C 1B	Feed select switch (28VDC) = quantity select - ext OR wing
258	EJL258 = EJS178	178	258	2	ESS, No. 2 Bus	INSPD Fig. 42 Zone 14A, 5C 1B	External select switch (28VDC) = quantity select - ext
259	EJL259 = DRS174 • MJS068 • GDS002 • GDS102	002 068 102 174	259	3	Left Main Bus	INSPD Fig. 42 Zone 14B, 2C 1A	Instrument test fuel 28VDC to the signal data converter = master test - test selector in-flt gr up - position AND test selector depressed AND left AND right M.G. weight on wheels
260	EJL260 = DRS174 • MJS068 • GDS002 • GDS102	002 068 102 174	260	3	Left Main Bus	INSPD Fig. 42 Zone 13B, 2C, 2A, 1A	Left electronic control amplifier - fuel low level test - enabled (AND) = master test - test selector - flt gr up position AND test selector - depressed AND left AND right M.G. weight on wheels

TABLE III F-14 SUSTAIN BOOLEAN EQUATIONS

1 Table Item #	2 Boolean Equation	3 Transducer List Cross Reference	4 Solid State Controller List Cross Reference	5 Bus/Load Management Priority	6 Special Considerations	7 Reference Drawings	8 Equation Description & Notes
261	$ES261 = DS174$ • $MS048$ • $GS002$ • $GS102$	002 068 102 174	261	3	Left Main Bus	INSFD Fig. 4-2 Zone 13A, 2C 2A, 1A	Right electronic control amplifier - fuel low level test - enabled (AND) - master test - test selector F16 gr up - position AND test selector - depressed AND left AND right M/G weight on wheels
277	$QS1277 =$ $(QS177 \cdot ES175 \cdot$ $(GS102 \cdot ES102))$ • $(QS189 \cdot QS173 \cdot$ $ES190) \cdot QS186$ + $(QS171 \cdot QS172)$	002 102 163 165 171 172 173 188 189 190	277	2	ESS, No. 2 Bus	INSFD Fig. 4-2 Zone	Wing motive flow solenoid transfer valve (cell No. 2) - energized (shutoff) - [dump-off OR combined aya. press. - < 4.50 PSI OR left AND right M/G - weight on wheels] AND [(wing/ext. trans. - auto AND refuel probe - ext/all AND L and R wing low level sensors - wet) OR wing/ext. trans. - oride OR (wing/ext. trans. off AND refuel probe - fus/extid)]



FIGURE 11. SHEET 1

TABLE 1. P-14 SUBTEL SIGNAL TRANSDUCERS

1 Table Item #	2 Signal Name/Function	3 Identifier Code	4 Signal Source Box Identification	5 Point of Origin	6 Transducer Type	7 Present Signal Characteristics	8 Associated Loads	9 Conventional Switches Being Replaced or Deleted	10 Operational Address	11 Reference Drawings	12 Associated Boolean Equation	13 Conditioning Technique
550	BLEED MANIFOLD > 475°F	HCS550	BLEED MANIFOLD 475°F OVERTEMP. SWITCH (42A7)	STARBOARD FS426 BLO WLI50	TEMPERATURE SWITCH	OPEN/+28V	BLEED MANI- FOLD 400°F MODULATING VALVE (42U9)	N/A	04P21	INSPD FIG. 4.3 ZONE 37B NAVAIR 01- F14AAA-2-2-4 005 FIG 2	563	RESISTOR DIVIDER ADAPTER
551	WELD HEAT- ON	HKS551	SYSTEM TEST PANEL (730A1)	NFO LEFT KNEE PANEL FS300	L2 POS ROTARY	OPEN/+28V	WINDSHIELD POWER CONTR. (40A1)	52-SYS TEST PHL (730A1)	03P18	INSPD FIG. 4.3 ZONE 31B NAVAIR 01- F14AAA-2-2-5 010 FIG 4	564	SOLID STATE
552	FIRE SHORT-ON	FFS552	SYSTEM TEST PANEL (730A1)	NFO LEFT KNEE PANEL FS300	L2 POS ROTARY	OPEN/28V	R & L ALARM CONTROLS (71A1, 71A2)	52-SYS TEST PHL (730A1)	03P19	INSPD FIG. 4.3 ZONE 31B NAVAIR 01- F14AAA-2-2-5 010 FIG 5	565	SOLID STATE
553	BLANK PULSE-ON	SBS553	SYSTEM TEST PANEL (730A1)	NFO LEFT KNEE PANEL FS300	L2 POSITION ROTARY	OPEN/28V	RAJAR WARNING SYSTEM	52-SYS TEST PHL (730A1)	03P20	INSPD FIG. 4.3 ZONE 31B NAVAIR 01- F14AAA-2-2-5 010 FIG 6	566	SOLID STATE
554	FIRE DET-ON	WCS554	MASTER TEST PANEL (730A1)	PILOTS RIGHT SIDE CONSOLE FS225	L2 POSITION ROTARY	OPEN/+28V	L & R ALARM CONTROLS (71A1, 71A2)	52 MASTER TEST (730A1)	02P48	INSPD FIG. 4.3 ZONE 38B NAVAIR 01- F14AAA-2-2-6 015 FIG 2	592	SOLID STATE
555	L. ALARM LAMP ON	WCS555	LEFT ALARM CONTROL (71A2)	RIGHT SIDE FS220	N/A	OPEN/+28V	L FIRE LAMP P/O AIR COMBAT MANEUVER PANEL (702A1)	N/A	07L26	INSPD FIG. 4.3 ZONE 38B NAVAIR 01- F14AAA-2-2-6 015 FIG 2	569	EXTERNAL SIGNAL ADAPTER

FIGURE 4.1 SHEET 2

TABLE 1. F-14 SUSTAINMENT SIGNAL TRANSDUCERS

1 Table Item #	2 Signal Name/Function	3 Identifier Code	4 Signal Source Box Identification	5 Point of Origin	6 Transducer Type	7 Present Signal Characteristics	8 Associated Loads	9 Conventional Switches Being Replaced or Deleted	10 Operational Address	11 Reference Drawings	12 Associated Boolean Equation	13 Conditioning Technique
556	R ALARM LAMP ON	NAS556	RIGHT ALARM CONTROL (71A1)	RIGHT SIDE FS230	N/A	OPEN/28V	R FIRE LAMP P/O AIR COMBAT MANEUVER PNL (702A1)	N/A	07D27		570	EXTERNAL SIGNAL ADAPTER
557	3FD BRAKES- HOLD	NAS557	THROTTLE QUADRANT (71A1)	PILOTS LEFT SIDE CONSOLE FS225	2PST SWITCH	HOLD = 28VDC HOLD = OPEN	SPEED BRAKE CONTROL VALVE (5A1)	N/A	01P55	INSFD FIG. 4.3 ZONE 34C NAVAIR 01- F14AAA-2-2-4 006 FIG 1	573	RESISTOR DIVIDER ADAPTER
558	3FD BRAKES - EXT	NAS558	THROTTLE QUADRANT (71A1)	PILOTS LEFT SIDE CONSOLE FS225	2PST SWITCH	EXT = 28VDC EXT = OPEN	SPEED BRAKE CONTROL VALVE (5A1)	N/A	01P56	INSFD FIG. 4.3 NAVAIR 01- F14AAA-2-2-4 006 FIG 1	573 574	RESISTOR DIVIDER ADAPTER
559	LAR 3FD BRAKE- IN	NAS559	LOWER SPEED BRAKE POSITION SWITCH (76S1)	AFT FS740	SPDT LIMIT SWITCH	IN = 28VDC IN = OPEN	WHEELS-FLAPS POS IND (79M1) FLAG 9	LOWER SPEED BRAKE POS SN (76S1)	06P38	INSFD FIG. 4.3 ZONE 40B NAVAIR 01- F14AAA-2-2-4 006 FIG 1	575 576 577	SOLID STATE
560	UPPER 3FD BRAKE-OTHER	NAS560	UPPER SPEED BRAKE POSITION SWITCH (76S2)	AFT FS675	SPDT LIMIT SWITCH	OTHER = 28VDC OTHER = OPEN	WHEEL - FLAPS POS IND (79M1) FLAG 9	UPPER SPEED BRAKE POS SN (76S2)	07P38	INSFD FIG. 4.3 NAVAIR 01- F14AAA-2-2-4 006 FIG 1	567 577	SOLID STATE
561	MASTER TEST - INST	JOS 561	MASTER TEST PANEL (73A1)	PILOT'S SIDE CONSOLE FS225	12 POSITION ROTARY PUSH TO TEST	INST = 28VDC INST = OPEN	LIQUID QUALITY INDICATOR (4A1)	52 - P/O MASTER TEST PANEL (73A1)	02P49	INSFD FIG. 4.3 NAVAIR 01- F14AAA-2-2-4 019 FIG 2	562	SOLID STATE
562	NO. 1 & NO. 2 AC & DC RELAYS ENERGIZED	NAS562	AC INR SWITCH ASSEM (67A2) DC INR SWITCH ASSEM (67A3)	PORT FS370 PORT FS370	RELAY CONTACTS	28VDC/OPEN	R23 INRGR GEN TEST NO. 2 RELAY (RIGHT GLOVE RELAY BOX 772A1)	N/A	03P21	INSFD FIG. 4.3 NAVAIR 01- F14AAA-2-2-5 011 FIG 9	568 569	RESISTOR DIVIDER ADAPTER

FIGURE 43 SHEET 3

TABLE 1 F-14 POSTEL SIGNAL TRANSDUCERS

1 Table Item #	2 Signal Name/Function	3 Identifier Code	4 Signal Source Box Identification	5 Point of Origin	6 Transducer Type	7 Present Signal Characteristics	8 Associated Loads	9 Conventional Switches Being Replaced or Deleted	10 Operational Address	11 Reference Drawings	12 Associated Boolean Equation	13 Conditioning Technique
563	ORC	MJS563	MASTER TEST PANEL (73A1)	PILOTS RIGHT SIDE CONSOLE FS225	12 POSITION ROTARY SWITCH WITH PUSH-TEST	OPEN/.28VDC	SEE REF DMS TEST NO. 1 RIRB 772A1	52 P/O MASTER TEST PANEL (73A1)	Q2P50	NAVAIR 01- F14AAA-2-2-9 011 FIG 56, 7, 8	582 583 584	SOLID STATE
564	EMERG GEN	MJS564	MASTER TEST PANEL (73A1)	PILOTS RIGHT SIDE CONSOLE FS225	12 POSITION ROTARY SWITCH WITH PUSH-TEST	OPEN/.28VDC	A24 EMERG GEN TEST NO. 1 RIRB 772A1	52 P/O MASTER TEST PANEL (73A1)	Q2P51	NAVAIR 01- F14AAA-2-2-9 011 FIG 9	578 579 585	SOLID STATE
565	MACH LEV	MJS565	MASTER TEST PANEL (73A1)	PILOT'S RIGHT SIDE CONSOLE FS225	12 POSITION ROTARY SWITCH WITH PUSH-TEST	OPEN/.28VDC	TEST INITIATE P/O MACH COVER CONTROL UNIT	52-P/O MASTER TEST PANEL (73A1)	Q2P52	NAVAIR 01- F14AAA-2-2-9 011 FIG 10	586 578 579	SOLID STATE
566	MCMP	MJS566	MASTER TEST PANEL (73A1)	PILOT'S RIGHT SIDE CONSOLE FS225	12 POSITION ROTARY SWITCH WITH PUSH-TEST	OPEN/.28VDC	TEST SIGNAL AIR DATA COM	52 - P/O MASTER TEST PANEL (73A1)	Q2P53	NAVAIR 01- F14AAA-2-2-9 011 FIG 11	587	SOLID STATE
567	TEST INITIATE ON	MJS567	AUC(09A1)	FS900	ENABLE SIGNAL	OPEN/.28V	TEST SIGNAL AUC	N/A	05DC8	NAVAIR 01- F14AAA-2-2-9 011 FIG 11	587	EXTERNAL SIGNAL ADAPTER
568	NFO SEAT HEIGHT - UP	WFS568	SEAT BUCKET HEIGHT ADJUSTMENT SWITCH (30A231)	NFO EJECTION SEAT (30A2 FS300	1 POT TOGGLE SWITCH	UP - SWITCHED 115VAC #6 OFF - OPEN	NFO EJECTION SEAT (30A2) PI MOTOR	SEAT BUCKET HEIGHT ADJUSTMENT SWITCH (30A231)	03P22	NAVAIR 01- F14AAA-2-2-9 00500 FIG 2	559	SOLID STATE
569	NFO SEAT HEIGHT DOWN	WFS569	SEAT BUCKET HEIGHT ADJUSTMENT SWITCH (30A231)	NFO EJECTION SEAT (30A2 FS300	1 POT TOGGLE SWITCH	DOWN - SWITCHED 115VAC #6 OFF - OPEN	NFO EJECTION SEAT (30A2) PI MOTOR	SEAT BUCKET HEIGHT ADJUSTMENT SWITCH (30A231)	03P23	NAVAIR 01- F14AAA-2-2-9 00500 FIG.2	588	SOLID STATE
570	PILOT SEAT HEIGHT - UP	WFS570	SEAT BUCKET HEIGHT ADJUSTMENT SWITCH (30A231)	PILOT EJECTION SEAT (30A1)	1 POT TOGGLE SWITCH	UP - SWITCHED 115VAC #6 OFF - OPEN	PILOT EJECTION SEAT (30A1)	SEAT BUCKET HEIGHT ADJUSTMENT SWITCH (30A231)	03P24	NAVAIR 01- F14AAA-2-2-9 00500 FIG. 2	589	SOLID STATE

FIGURE 43 SHEET 4

TABLE I. P-14 SATEL SIGNAL TRANSDUCERS

1 Table Item #	2 Signal Name/Function	3 Identifier Code	4 Signal Source Box Identification	5 Point of Origin	6 Transducer Type	7 Present Signal Characteristics	8 Associated Loads	9 Conventional Switches Being Replaced or Deleted	10 Operational Address	11 Reference Drawings	12 Associated Boolean Equation	13 Conditioning Technique
571	PILOT SEAT HEIGHT-DOWN	WFS571	SEAT BUCKET HEIGHT ADJUSTMENT SWITCH (39A1S1)	PILOT EJECTION SEAT (39A1) PS240	1 PUT TOGGLE SWITCH	DOWN-SWITCHED 115VAC 60 OFF = OPEN	PILOT EJECTION SEAT (39A1) M1 MOTOR	SEAT BUCKET HEIGHT ADJUSTMENT SWITCH (39A1S1)	03P25	NAVAIR 01- F14AAA-2-2-5 00500 FIG. 2	590	SOLID STATE
572	EJECT MODE SELECTOR-PILOT	WFS572	EJECT MODE SELECTOR SWITCH (70S3) P/O EJECT CMD PANEL	WFO LEFT SIDE CONSOLE PS320	1 PUT HANDLE ACTUATED SWITCH	PILOT = SWITCHED 28VDC MC0 = SWITCHED 28VDC	PILOT EJECT CMD INDICATOR (LANDING GEAR CONTROL PANEL)	N/A	03P26	NAVAIR 01- F14AAA-2-2-5 004 FIG. 2	560 591	RESISTOR DIVIDER ADAPTER
573	FIRE SHORT - SELECTED	WGS573	SYS. TEST-SIS PWR PANEL (790A1)	WFO LEFT KNEE PANEL PS300	9 POSITION ROTARY SWITCH	SWITCHED 28VDC	a) LEFT ALARM CONTROL (71A2) b) RIGHT ALARM CONTROL (71A1) (FIRE DETECTION SHORT TEST SIGNAL)	SYSTEM TEST - SYSTEM PWR PANEL (790A1) 52 - ROTARY SWITCH	03P27	14SFD FIG. 43 NAVAIR 01- F14AAA-2-2-5 015 FIG. 2	568	SOLID STATE
574	FAULT SIGNAL - LEFT	IDS574	MACH LEVER CONTROL UNIT (46A1)	PORT PS710	N/A	28VDC/OPEN	NO-GO LAMP P/O MASTER TEST PANEL (73A1)	N/A	05D29	NAVAIR 01- F14AAA-2-2-5 011 FIG. 10	579	EXTERNAL SIGNAL ADAPTER
575	FAULT SIGNAL - RIGHT	IDS575	MACH LEVER CONTROL UNIT (46A1)	PORT PS710	N/A	28VDC/OPEN	NO-GO LAMP P/O MASTER TEST PANEL (73A1)	N/A	05D30	NAVAIR 01- F14AAA-2-2-5 011 FIG. 10	579	EXTERNAL SIGNAL ADAPTER
576	GO SIGNAL	IDS576	MACH LEVER CONTROL UNIT (46A1)	PORT PS710	N/A	28VDC/OPEN	NO LAMP P/O MASTER TEST PANEL (73A1)	N/A	05D31	NAVAIR 01- F14AAA-2-2-5 011 FIG. 10	578	EXTERNAL SIGNAL ADAPTER
577	AIR PRESS 210.5 PSIG	DES577	AUX FUEL TANK AIR PRESSURE SWITCH (62S5)	STARBOARD PS550	N/A	28VDC/OPEN	NO LAMP P/O MASTER TEST PANEL	N/A	07D28	NAVAIR 01- F14AAA-2-2-5 011 FIG. 10	578	EXTERNAL SIGNAL ADAPTER
578	AIR PRESS 20.5 PSIG	DES578	AUX FUEL TANK AIR PRESSURE SWITCH (62S5)	STARBOARD PS550	N/A	28VDC/OPEN	NC-GO LAMP	N/A	07D29	NAVAIR 01- F14AAA-2-2-5 011 FIG. 10	579	EXTERNAL SIGNAL ADAPTER



FIGURE 15 SHEET 5

TABLE 1 P-14 SATEL SIGNAL TRANSDUCERS

1 Table Item #	2 Signal Name/Function	3 Identifier Code	4 Signal Source Box Identification	5 Point of Origin	6 Transducer Type	7 Present Signal Characteristics	8 Associated Loads	9 Conventional Switches Being Replaced or Deleted	10 Operational Address	11 Reference Drawings	12 Associated Boolean Equation	13 Conditioning Technique
247	UNIT - ON	MAE/71	STS TEST. STS PWR PANEL-56 (790A1)	NFO LEFT KNEE PANEL FS300	DPDT TOGGLE SWITCH	ON = SWITCHED 115VAC/25VAC OFF = OPEN	115VAC & 25VAC INSTRUMENT BUS	INST SWITCH - 56 STS TEST STS PWR PANEL (790A1)	03P28	INSPD FIG. 43 ZONE 16	580 581	SOLID STATE



FIGURE 13 SHEET 1

TABLE II F-4U SOLID STATE POWER CONTROLLERS AND DRIVERS

1 Table Item #	2 Type of Power Controller	3 Rating V & I	4 Associated Loads	5 Duty Cycle	6 Load Power Dissipation	7 P.C. Location	8 Conventional Devices Being Replaced	9 Operational Address	10 Identifier Code	11 Reference Drawings	12 Associated Boolean Equations
559	AC - 1 POLE	V-115VAC I-8A	INFO SEAT BUCKET HEIGHT ADJUSTMENT MOTOR M1 (36A2) VP PHASE				CB7-ACM 17/SEAT ADM/STEADY POS LT P/O 7 AC R MAIN CIRCUIT BREAKER PANEL (35A1)	07Q21	WFL559	INSPD FIG. 43 ZONE 18C NAVAIR OL- FL4AAA-2-2-3 005 FIG. 2	559
560	LAMP DRIVER	V-28VDC	EJECT COMMAND INDICATOR (70A1) PILOTS LANDING GEAR CONTROL PANEL				CB34-CAH/LAD CAUTION EJECT CMD IND P/O 8 DC ESS 2 C1CT BREAKER PANEL (36A2)	01R22	WFL560	INSPD FIG. 43 ZONE 38C NAVAIR OL- FL4AAA-2-2-3 004 FIG. 2	560
561	AC - 1 POLE	V-115VAC I-8A	LIQUID QUANTITY INDICATOR (41M1) (POWER SOURCE)	100%			CB13-OXY QTY IND P/O 5 AC ESS 2 BA CKT BREAKER PANEL (35A2)	07Q22	XAL561	INSPD FIG. 43 ZONE 29C NAVAIR OL- FL4AAA-2-2-2 019 FIG. 2	561
562	RELAY DRIVER	V- +28VDC	RELAY COIL IN LIQUID QUANTITY INDICATOR (41M1)				CB11-MASTER TEST (36A4) MASTER TEST SM P/O MASTER TEST PANEL (73A1)	01R23	WHL562	INSPD FIG. 43 ZONE 32B NAVAIR OL- FL4AAA-2-2-2 019 FIG. 2	562
563	SOLENOID DRIVER	V- +28VDC	BLEED MANIFOLD MODULATING VALVE (4219)				CB42(5A) CABIN PRESS (36A2) BLEED MANIFOLD 475°F OVERTEMP SM (42A7)	06Q05	HCL563	INSPD FIG. 43 ZONE 37B NAVAIR OL- FL4AAA-2-2-2 005 FIG. 2	563
564	DC - 1 POLE	V- +28VDC	WINDSHIELD POWER CONTROL (40A1)				CB32(5A) GND TEST/MACH LVR (36A4) P/O K19 M/G SAFETY A RLY RHB (772A1) 51, 54, 52 - SYSTEM TEST PNL (79A1)	0AQ20	HKL564	INSPD FIG. 43 ZONE 31B NAVAIR OL- FL4AAA-2-2-5 010 FIG. 4	564
565	DC - 1 POLE	V- +28VDC	A & L ALARM CONTROLS (71A1, 71A2)				CB32-GND TEST/MACH LVR BIT (36A4) K19 M/G SAFETY A RLY RHB (772A1) 51, 52, 54 - SYSTEM TEST PNL (79A1)	07R30	FFL565	INSPD FIG. 43 ZONE 31B NAVAIR OL- FL4AAA-2-2-5 010 FIG. 5	565

TABLE II. P-14 SOLID STATE POWER CONTROLLERS AND DRIVERS

1 Table Item #	2 Type of Power Controller	3 Rating V & I	4 Associated Loads	5 Duty Cycle	6 Load Power Dissipation	7 P.C. Location	8 Conventional Devices Being Replaced	9 Operational Address	10 Identifier Code	11 Reference Drawings	12 Associated Boolean Equations
566	DC - 1 POLE	V = +28VDC	RAIAR WARNING SYSTEM				CB32-GND TEST/MACH LVR BIT (36A) K19 M/G SAFETY A RLY RGRS (772A1) 51, 56, 54 - SYSTEM TEST PNL (750A1)	07Q23	ML566	INSFD FIG. 43 ZONE 31B NAVAIR 01- FLMAAA-2-2-5 010 FIG. 6	566
567	AC - 1 POLE	V=115VAC PC	HTP & HTR CONTROL ICE DETECTOR (39A1) (LEFT INLET INCT)	100%			CB12-ICE DET (35A6)		ML567	INSFD FIG. 43 ZONE 29C NAVAIR 01- FLMAAA-2-2-6 015 FIG. 2	567
568	ENABLE DRIVER	V = +28VDC	a) LEFT ALARM CONTROL (71A2) b) RIGHT ALARM CONTROL (71A1) (FIRE DETECTION SHORT TEST SIGNAL)				CB32(5A) GND TEST/MACH LVR BIT (36A) P/O K19 M/G SAFETY A (RIGHT GLOVE RELAY BOX 772A1)	01D24	ML568	INSFD FIG. 43 NAVAIR 01- FLMAAA-2-2-6 015 FIG. 2	568
569	LAMP DRIVER	V = +28VDC	L FIRE LAMP P/O AIR COMBAT MANEUVER PNL (702A1)				P/O K14-WARM LT TEST (RIGHT GLOVE RELAY BOX 772A1) CB33-1 FIRE DET LT (36A2)	01D25	ML569	INSFD FIG. 43 ZONE 38B NAVAIR 01- FLMAAA-2-2-6 015 FIG. 2	569
570	LAMP DRIVER	V = +28VDC	R FIRE LAMP P/O AIR COMBAT MANEUVER PNL (702A1)				CB32-R FIRE DET LT (36A2) P/O K14-WARM LT TEST (RIGHT GLOVE RELAY BOX 772A1)	01D26	ML570	INSFD FIG. 43 ZONE 38B NAVAIR 01- FLMAAA-2-2-6 015 FIG. 2	570
571	DC - 1 POLE	V = +28VDC	+28VDC INPUT & CAUTION (P/O L ALARM CONTROL 71A2)	100%			CB33 L FIRE DET LT (36A2)	07Q24	PA1571	INSFD FIG. 43 ZONE 38B NAVAIR 01- FLMAAA-2-2-6 015 FIG. 2	571
572	DC - 1 POLE	V = +28VDC	+28VDC INPUT & CAUTION (P/O R ALARM CONTROL 71A1)				CB32 R FIRE DET LT (36A2)	07Q25	PA1572	INSFD FIG. 43 ZONE 38B NAVAIR 01- FLMAAA-2-2-6 015 FIG. 2	572

FIGURE 42, SHEET 3

TABLE II F-4A SOLID STATE POWER CONTROLLERS AND DRIVERS

1 Table Item #	2 Type of Power Controller	3 Rating V & I	4 Associated Loads	5 Duty Cycle	6 Load Power Dissipation	7 P.C. Location	8 Conventional Devices Being Replaced	9 Operational Address	10 Identifier Code	11 Reference Drawings	12 Associated Boolean Equations
573	SOLENOID DRIVER	V = +28VDC	SOL. NO. 1 SPD BRK CONT VALVE (54L1)				CB7 SPBK/P-ROLL TRIM ENABLE (36A3)	11Q33	MA1573	INSPD FIG. 43 ZONE 36C NAVAIR OL- F14AAA-2-2-4 006 FIG. 1	573
574	SOLENOID DRIVER	V = +28VDC	SOL. NO. 1 SPD BRK CONT VALVE (54L1)				CB7(5A) SPBK/P-ROLL TRIM ENABLE (36A3)	11Q34	MA1574	INSPD FIG. 43 NAVAIR OL- F14AAA-2-2-4 006 FIG. 1	574
575	PLUG DRIVER	V = +28VDC	SPEED BREAKER-IN INDICATION (78M1)				CB1-GND ROLL BRAKING/ SPOILER POS IND (36A2) UPPER & LOWER SPEED BRAKE POS SW (78S1, 78S2)	01D27	MA1575	INSPD FIG. 43 ZONE 40B F14AAA-2-2-4 006 FIG. 1	575
576	PLUG DRIVER	V = +28VDC	SPEED BREAKER-PARTIAL INDICATION (78M1)				CB1-GND ROLL BRAKING/ SPOILER POS. IND (36A2)	01D28	MA1576	INSPD FIG. 43 NAVAIR OL- F14AAA-2-2-4 006 FIG. 1	576
577	PLUG DRIVER	V = +28VDC	SPEED BRAKES - ROLL INDICATION (78M1)				CB1-GND ROLL BRAKING/ SPOILER POS. IND (36A2)	01D29	MA1577	INSPD FIG. 43 NAVAIR OL- F14AAA-2-2-4 006 FIG. 2	577
578	LAMP DRIVER	V = 28VDC	MASTER TEST PANEL (73A41) (30 LAMP)				CB11(3A) MASTER TEST (36A4) CB16(5A) EMERG GEN TEST/L AUCS LX UP PHR (36A2) K23, K24 (K2RB)	01D30	MA1578	NAVAIR OL- F14AAA-2-2-9 011 FIG. 3, 9, 10, 13	578
579	LAMP DRIVER	V = 28VDC	MASTER TEST PANEL (73A41) (NO GO LAMP)				CB11(3A) MASTER TEST (36A4) CB2(5A) EMERG GEN CUMTH (36A4) K23, K24, (K2RB)	01D31	MA1579	NAVAIR OL- F14AAA-2-2-9 011 FIG. 3, 9 10, 13	579
580	AC - 1 POLE	V=115VAC ØB I=7.5A	115VAC INSTRUMENT BUS				CB26(7.5A) INST BUS FDR (35A4) P/O K2 MUG SAFETY F (RIGHT GLOVE RELAY BOX 772A1)		MA1580	INSPD FIG. 43 ZONE 16	580

TABLE II. P-10 SOLID STATE POWER CONTROLLERS AND DRIVERS

1 Table Item #	2 Type of Power Controller	3 Rating V & I	4 Associated Loads	5 Duty Cycle	6 Load Power Dissipation	7 P.C. Location	8 Conventional Devices Being Replaced	9 Operational Address	10 Identifier Code	11 Reference Drawings	12 Associated Boolean Equations
501	AC - 1 POLE	V = 26VAC	26VAC INST BUS				CB1(5A) 26VAC BUS FUR (35A2) P/O K17 MLG SAFETY J (LEFT GLOVE RELAY BOX 773A1)		XAL581	INSPD FIG. 43 ZONE 16	581
502	ENABLE DRIVER	V = 28VDC	a) (ORC SELECT 28VDC) P/O THROTTLE CONTROL COMPUTER (21A1) b) (PILOT ORC DISCRETE-ON) P/O CSDC (07A1)				CB1-MASTER TEST (36A4) 53 & 52-MASTER TEST PANEL (73A1) K29 - MLG SAFETY M HGRB (772A1)	04D08 04D27	MUL582	INSPD FIG. 43 ZONE 32B NAVAIR OI- PI4AAA-2-2-9 OIL FIGS 6, 7 8,	582
503	ENABLE DRIVER	V = 28VDC	(BIT ARM - 28VDC) ARCHAFT YAW COMPUTER (20A1)				CB1(3A) MASTER TEST (36A4)	06D28	MUL583	INSPD FIG. 43 ZONE 32B NAVAIR OI- PI4AAA-2-2-9 OIL FIG 6, 7, 8	583
504	ENABLE DRIVER	V = 28VDC	a) PITCH COMPUTER (30A2) b) ROLL COMPUTER (30A3) (BIT ARM - 28VDC)				CB1-MASTER TEST (36A4) 52-MASTER TEST PANEL (73A1) K29-MLG SAFETY M HGRB (772A1) K57-WING SHIP > 60° HGRB (772A1) K60-FLAPS DOWN HGRB (772A1)	04D28 06D29	MUL584	INSPD FIG. 43 ZONE 32B NAVAIR OI- PI4AAA-2-2-9 OIL FIG. 6, 7 8	584
505	DC - 1 POLE	V = 28VDC	MOTOR GENERATOR SOLENOID CONTROL VALVE (67L1)				CB2(5A) EMERG GEN (36A4) CB1(3A) MASTER TEST (36A4) CB16(3A) EMERG GEN TEST/L ACS LX UP FWR (36A2) P/O K24 EMERG GEN TEST NO. 1 RELAY P/O K23 EMERG GEN TEST NO. 2 RELAY	03Q46	MUL585	INSPD FIG. 43 NAVAIR OI- PI4AAA-2-2-9 OIL FIG. 9	585



TABLE II F-4B SOLID STATE POWER CONTROLLERS AND DRIVERS

1 Table Item #	2 Type of Power Controller	3 Rating V & I	4 Associated Loads	5 Duty Cycle	6 Load Power Dissipation	7 P.C. Location	8 Conventional Devices Being Replaced	9 Operational Address	10 Identifier Code	11 Reference Drawings	12 Associated Boolean Equations
586	ENABLE DRIVER	V-28VDC	(TEST INITIATE-ON) MACH LEVER CONTROL UNIT (46A1)				CB11-MASTER TEST (36A4) 52, 53-MASTER TEST PANEL (73A1) K29-MIG SAFETY N RGRB (772A1)	06D30	MJL586	INSPD FIG. 43 ZONE 32B NAVAIR OI- FLAMAA-2-2-9 OIL FIG. 10	586
587	ENABLE DRIVER	V-28VDC	(TEST SIGNAL-ON) AIC (05A1)				52, 53-MASTER TEST PANEL (73A1) K12 MIG SAFETY K RGRB (772A1)	06D40	MJL587	NAVAIR OI- FLAMAA-2-2-9 OIL FIG. 11	587
588	AC - 1 POLE (ASSOCIATED WITH 589)	V-115VAC 86	WFO SEAT BUCKET HEIGHT ADJUSTMENT MOTOR-M1 (36A2) DOWN PHASE				CB7(5A) ACM LT/SEAT ADM/STEADY POS LT (35A1)	07Q26	WFL588	NAVAIR OI- FLAMAA-2-2-3 00500 FIG. 2	588
589	AC - 1 POLE (ASSOCIATED WITH 590)	V-115VAC 86	PILOT SEAT BUCKET HEIGHT ADJUSTMENT MOTOR - M1 (36A1) UP PHASE				CB7(5A) ACM LT/SEAT ADM/STEADY POS LT (35A1)	07Q27	WFL589	NAVAIR OI- FLAMAA-2-2-3 00500 FIG. 2	589
590	AC - 1 POLE (ASSOCIATED WITH 589)	V-115VAC 86	PILOT SEAT BUCKET HEIGHT ADJUSTMENT MOTOR - M1 (36A1) DOWN PHASE				CB7(5A) ACM LT/SEAT ADM/STEADY POS LT (35A1)	07Q28	WFL590	NAVAIR OI- FLAMAA-2-2-3 00500 FIG. 2	590
591	LAMP DRIVER	V-28VDC	EJECT COMMAND INDICATOR (70A1) PILOTS LANDING GEAR CONTROL PANEL				CB34(3A) LAMP/LAU CAUTION EJECT CMD IND (36A2)	01D32	WFL591	NAVAIR OI- FLAMAA-2-2-3 005 FIG. 2	591
592	ENABLE DRIVER	V-28VDC	a) LEFT ALARM CONTROL (71A2) b) RIGHT ALARM CONTROL (71A1) (FIRE TEST SWITCH SIGNAL)				CB11(3A) MASTER TEST (36A4)	01D33	WGL592	INSPD FIG. 43 NAVAIR OI- FLAMAA-2-2-6 OIL FIG. 2	592



TABLE III F-14 NOSE/TEL BOOLEAN EQUATIONS

1	2	3	4	5	6	7	8
Table Item #	Boolean Equation	Transducer List Cross Reference	Solid State Controller List Cross Reference	Bus/Load Management Priority	Special Considerations	Reference Drawings	Equation Description & Notes
559	WFL559 = WFS568	568	559	3	a) R. MAIN BUS b) CAN BE A SINGLE POLE-DOUBLE THROW CENTER OFF POWER CONTROLLER ASSOCIATED WITH WFL588	INSD FIG. 43 ZONE 1BC MAVALR OI- FI4AAA-2-2-3 005 FIG. 2	RFO SEAT BUCKET HEIGHT ADJUSTMENT MOTOR-UP = RFO SEAT HEIGHT - UP
560	WFL560 = WFS572	572	560	2	a) APCUS BUS b) ASSOCIATE WITH WFL591	INSD FIG. 43 ZONE 3BC MAVALR OI- FI4AAA-2-2-3 004 FIG. 2	PILOTS EJECT COMMAND INDICATOR (70M1) - PILOT = EJECT MODE SELECTOR - PILOT
561	XAL561	N/A	561	2	INSTRUMENT BUS	INSD FIG. 43 ZONE 25C MAVALR OI- FI4AAA-2-2-2 019 FIG. 2	LIQUID QUANTITY INDICATOR (4LM1) POWER SOURCE - ENABLED = 115VAC PHA ESS NO. 2 BUS-ON
562	WFL562 = MFS568 • DMS561	068 561	562	3	L. MAIN BUS	INSD FIG. 43 ZONE 32B MAVALR OI- FI4AAA-2-2-2 019 FIG. 2	RELAY COIL IN LIQUID QUANTITY INDICATOR - ENERGIZED = TEST SELECTOR - DEPRESSED AND MASTER TEST- INST
563	NCL563 = HCS550	550	563	2	APCUS BUS	INSD FIG. 43 ZONE 37B MAVALR OI- FI4AAA-2-2-2 005 FIG. 2	BLEED MANIFOLD MODULATING VALVE - ENERGIZED = BLEED MANIFOLD SW - > 475°F
564	HCL564 = HCS551 • MUS555 • • MARS54 • GDS002 • GDS102	002 054 055 102 551	564	3	R. MAIN BUS	INSD FIG. 43 ZONE 31B MAVALR OI- FI4AAA-2-2-5 010 FIG. 4	WINGSHIELD POWER CONTROL - ON = WELD HEAT - ON AND TEST - DEPRESSED AND DOOR SWITCH-OPEN AND L AND R MAIN LOG-MOM
565	PFL565 = PFS552 • MUS555 • MARS54 • • GDS002 • GDS102	002 054 055 102 552	565	3	R. MAIN BUS	INSD FIG. 43 ZONE 31B MAVALR OI- FI4AAA-2-2-5 010 FIG. 5	R AND L ALARM CONTROL - ON = FIRE SHORT-ON AND TEST DEPRESSED AND DOOR SWITCH-OPEN AND L AND R MAIN LOG- MOM

TABLE III P-14 SOSTEL BOOLEAN EQUATIONS

FIGURE 4-3 SHEET 2

1 Table Item #	2 Boolean Equation	3 Transducer List Cross Reference	4 Solid State Controller List Cross Reference	5 Bus/Load Management Priority	6 Special Considerations	7 Reference Drawings	8 Equation Description & Notes
566	SM1566 = GNS573 • MJS055 • WAS074 • GDS002 • GDS102	002 054 055 102 553	566	3	R. MAIN BUS	INSPD FIG. 43 ZONE 31B NAVAIR OL- FLHAAA-2-2-5 O10 FIG. 5	RADAR WARNING SYSTEM- ON = BLANK PULSE-ON AND TEST-DEPRESSED AND DOOR SWITCH-OPEN AND L AND R MAIN LOG - WOV
567	HEL567	N/A	567	2	ESS. NO. 2 BUS	INSPD FIG. 43 ZONE 29C NAVAIR OL- FLHAAA-2-2-6 O13 FIG. 2	HTR & HTR CONTROL - ON = 115VAC PH C ESS NO. 2 - ON
568	WCL568 = GDS002 • GDS102 • WAS074 • MJS055 • WGS573	002 054 055 102 573	568	3	R. MAIN BUS	INSPD FIG. 43 NAVAIR OL- FLHAAA-2-2-6 O15 FIG. 2	LEFT AND RIGHT ALARM CONTROL - FIRE DETECTION SHORT TEST SIGNAL (28VDC) = LEFT AND RIGHT MIG-WEIGHT ON WHEELS AND DOOR SWITCH - OPEN AND TEST - DEPRESSED AND FIRE SHORT-SELECTED
569	WCL569 = WGS555 + (LAS073 • MJS066)	068 073 556 555	569	2	AFCS BUS	INSPD FIG. 43 ZONE 38B NAVAIR OL- FLHAAA-2-2-6 O15 FIG. 2	L. FIRE LAMP-ON = L. ALARM LAMP-ON OR LTS AND TEST SELECTOR - DEPRESSED
570	WCL570 = WGS556 • (LAS073 • MJS066)	068 073 556	570	2	AFCS BUS		R. FIRE LAMP - ON = R. ALARM LAMP - ON LTS AND TEST SELECTOR - DEPRESSED
571	FAL571	N/A	571	2	AFCS BUS	INSPD FIG. 43 ZONE 38B NAVAIR OL- FLHAAA-2-2-6 O15 FIG. 2	*28VDC INPUT & CAUTION - ON = 28VDC ESS NO. 2 BUS - ON
572	FAL572	N/A	572	2	AFCS BUS	INSPD FIG. 43 NAVAIR OL- FLHAAA-2-2-6 O15 FIG. 2	*28VDC INPUT & CAUTION - ON = 28VDC ESS NO. 2 BUS - ON

TABLE III. P-14 SOLID STATE BOLEMAN EQUATIONS

FIGURE 11. SHEET 3

1 Table Item #	2 Boolean Equation	3 Transducer List Cross Reference	4 Solid State Controller List Cross Reference	5 Bus/Load Management Priority	6 Special Considerations	7 Reference Drawings	8 Equation Description & Notes
573	$MA1573 = QAS194$ • $QAS195$ • $(MA5557 + MA5558)$	194 195 557 558	573	2	ESS. NO. 2 BUS	INSFD FIG. 43 ZONE 360 NAVAIR 01- FIHAAA-2-2-4 006 FIG. 1	SOL NO. 1 SPDRK COME VALVE - ON = LEFT THROTTLE - < MIL FWR AND RIGHT THROTTLE - < MIL FWR AND SPD BRAKES (HOLD OR EXT)
574	$MA1574 = MA5558$	558	574	2	ESS. NO. 2 BUS	INSFD FIG. 43 NAVAIR 01- FIHAAA-2-2-4 006 FIG. 1	SOL NO. 2 SPDRK COME VALVE - ON = SPD BRAKES - EXT
575	$MA1575 = MA5559$	559	575	2	ESS. NO. 2 BUS	INSFD FIG. 43 ZONE 408 NAVAIR 01- FIHAAA-2-2-4 006 FIG. 1	SPEED BRAKES - IN = LMR SPD BRAKE - IN
576	$MA1576 = MA5560, MA5559$	559 560	576	2	ESS. NO. 2 BUS	INSFD FIG. 43 ZONE 408 NAVAIR 01- FIHAAA-2-2-4 006 FIG. 1	SPEED BRAKES - PARTIAL = UPPER SPD BRAKE - OTHER AND LMRSPD BRAKE - NOT IN (OTHER)
577	$MA1577 = MA5560$ • $MA5559$	559 560	577	2	ESS. NO. 2 BUS	INSFD FIG. 43 NAVAIR 01- FIHAAA-2-2-4 006 FIG. 1	SPEED BRAKES - FULL = UPPER SPD BRAKE - FULL AND LMR SPD BRAKE - NOT IN (OTHER)
578	$MA1578 = MA3048$ • $MA3073$ • $MA3564$ • $MA3562$ • $MA3565$ • $MA3576$ • $(MA3574 + MA3577)$	068 073 174 562 564 565 576 577	578	3	L. MAIN BUS	NAVAIR 01- FIHAAA-2-2-9 011 FIG. 3, 9, 10, 13	MASTER TEST PANEL - GO LAMP ON = TEST SELECTOR - DEPRESSED AND LITS OR (EMERG GEN AND NO 1 AND NO 2 AC AND DC RELAYS - ENERGIZED) OR (MACH LEV AND GC SIGNAL) OR (FLT GR UP AND AIR PRESS $\approx 10.5$ PSIG)

TABLE III F-14 SUSTEL BOOLEAN EQUATIONS

1 Table Item #	2 Boolean Equation	3 Transducer List Cross Reference	4 Solid State Controller List Cross Reference	5 Bus/Load Management Priority	6 Special Considerations	7 Reference Drawings	8 Equation Description & Notes
579	$M1579 = M15068 \bullet$ $M15271 \bullet M15664 \bullet$ $M15281 \bullet M15595 \bullet$ $(M15576 \bullet M15575) \bullet$ $(M15174 \bullet M15578) \bullet$	068 073 174 564 565 574 575 578	579	3	L. MAIN BUS	NAVAIR OL- FLMAA-2-2-9 OLL FIG. 3, 9 10, 13	MASTER TEST PANEL - NO GO LAMP ON = TEST SELECTOR DEPRESSED AND [LTS OR (EMERG GEN AND PWR 1 AND NO. 2) AND (EMERG GEN DE-ENERGIZED) OR PWR 1 AND NO. 1 LEFT OF TIGHT FAULT SIGNAL) OR (FIT OR UP AND AIR PRESS < 6.5 PSIG)]
580	$M1580 = M15277 \bullet$ $M153002 \bullet M153102$	002 102 277	580	2	ESS. NO. 2 BUS	INSFD FIG. 4, 3 ZONE 16	115VAC PWR INST BUS PWR - ON = INST - ON OR LEFT OR RIGHT MUG-WEIGHT ON WHEELS NOT
581	$M1581 = M15277 \bullet$ $M153002 \bullet M153102$	002 102 277	581	2	ESS. NO. 2 BUS	INSFD FIG. 4, 3 ZONE 16	26VAC INST BUS PWR - ON = INST - ON OR LEFT OR RIGHT MUG-WEIGHT ON WHEELS NOT
582	$M1582 = M15563 \bullet$ $M153068 \bullet M153002$ $M153102$	002 068 102 563	582	3	L. MAIN BUS	INSFD FIG. 4, 3 ZONE 3CB NAVAIR OL- FLMAA-2-2-9 OLL FIGS 6, 7, 8	THROTTLE CONTROL COMPUTER - ORC SELECT 28VDC AND CSIC- PILOT ORC DISCRETE ON = ORC AND TEST SELECTOR DEPRESSED AND L AND R MUG - NOT
583	$M1583 = M15563 \bullet$ $M153002 \bullet M153102$	002 102 563	583	3	L. MAIN BUS	INSFD FIG. 4, 3 ZONE 3CB NAVAIR OL- FLMAA-2-2-9 OLL FIG. 6, 7, 8	YAW COMPUTER - BIT ARM 28VDC = ORC AND L AND R MUG-WOM
584	$M1584 = M153002 \bullet$ $M153102 \bullet M15563 \bullet$ $(M15217 \bullet M15218 \bullet$ $M153001$	001 002 102 217 218 563	584	3	L. MAIN BUS	INSFD FIG. 4, 3 ZONE 3CB NAVAIR OL- FLMAA-2-2-9 OLL FIGS 6, 7, 8	BIT ARM - ON = L AND R MUG-WOM AND ORC AND (LEFT FLAP - > 25° OR RIGHT FLAP - > 25° OR MING SMP - > 62°)
585	$M1585 = M153068 \bullet$ $M15564 \bullet M15564 \bullet$	068 564 529	585	3	L. MAIN BUS	INSFD FIG. 4, 3 ZONE 3CB NAVAIR OL- FLMAA-2-2-9 OLL FIG. 9	MOTOR-GENERATOR SOLENOID CONTROL VALVE-ENERGIZED (MOTOR GENERATOR-OFF) = MASTER TEST-NOT DEPRESSED OR EMERG GEN-NOT SELECTED AND LEFT DC PWR-ON LINE



TABLE III F-14 SUSTEL BOOLEAN EQUATIONS

1 Table Item #	2 Boolean Equation	3 Transducer List Cross Reference	4 Solid State Controller List Cross Reference	5 Bus/Load Management Priority	6 Special Considerations	7 Reference Drawings	8 Equation Description & Notes
586	MUS586 = MUS068 • • MUS565 • GUS002 • GUS102	002 068 102 565	586	3	L. MAIN BUS	INSPD FIG. 43 ZONE 2B NAVAIR OL- FI4AAA-2-2-9 O11 FIG 10	TEST INITIATE - ON = TEST SELECTOR - DEPRESSED AND MACH LEV AND LEFT AND RIGHT M/G - WEIGHT ON WHEELS
587	MUS587 = GUS002 • GUS102 • MUS068 • MUS566 • MUS567	002 068 102 566 567	587	3	L. MAIN BUS	NAVAIR OL- FI4AAA-2-2-9 O11 FIG 11	TEST SIGNAL - ON = L AND R M/G-WOW AND TEST SELECTOR-DEPRESSED AND M/G SMP AND TEST INITIATE - ON
588	WFL588 = WFS569	569	588	3	a) R. MAIN BUS b) CAN BE A SINGLE POLE - DOUBLE THROW CENTER OFF POWER CONTROLLER ASSOCIATED WITH WFL559	INSPD FIG. 43 NAVAIR OL- FI4AAA-2-2-3 00500 FIG. 2	NFO SEAT BUCKET HEIGHT ADJUSTMENT MOTOR-DWN = NFO SEAT HEIGHT - DWN
589	WFL589 = WFS570	570	589	3	a) R. MAIN BUS b) CAN BE A SINGLE POLE DOUBLE THROW CENTER OFF POWER CONTROLLER ASSOCIATED WITH WFL590	NAVAIR OL- FI4AAA-2-2-3 00500 FIG. 2	PILOT SEAT BUCKET HEIGHT ADJUSTMENT MOTOR-UP = PILOT SEAT HEIGHT - UP
590	WFL590 = WFS571	571	590	3	a) R. MAIN BUS b) CAN BE A SINGLE POLE DOUBLE THROW CENTER OFF POWER CONTROLLER ASSOCIATED WITH WFL589	INSPD FIG. 43 NAVAIR OL- FI4AAA-2-2-3 00500 FIG. 2	PILOT SEAT BUCKET HEIGHT ADJUSTMENT MOTOR - DWN = PILOT SEAT HEIGHT - DWN
591	WFL591 = WFS572	572	590	3	a) APCS BUS b) ASSOCIATED WITH WFL560	INSPD FIG. 43 NAVAIR OL- FI4AAA-2-2-3 005 FIG. 2	PILOTS EJECT COMMAND INDICATOR (TOML) - MOD. EJECT MODE SELECTOR - MCO (PILOT M/T)
592	WFL592 = MUS554 • MUS068	068 554	592	3	L. MAIN BUS	INSPD FIG. 43 NAVAIR OL- FI4AAA-2-2-6 O15 FIG. 2	LEFT AND RIGHT ALARM CONTROL - FIRE TEST SWITCH SIGNAL 28VDC = FIRE DET - ON AND TEST SELECTOR DEPRESSED



FIGURE 11 SHEET 1

TABLE 1 P-14 SOSTEL SIGNAL TRANSDUCERS

1 Table Item #	2 Signal Name/Function	3 Identifier Code	4 Signal Source Box Identification	5 Point of Origin	6 Transducer Type	7 Present Signal Characteristics	8 Associated Loads	9 Conventional Switches Being Replaced or Deleted	10 Operational Address	11 Reference Drawings	12 Associated Boolean Equation	13 Conditioning Technique
083	PROBE OUT/ LOCKED SWITCH - LOCKED	QF5083	PROBE OUT/LOCKED SWITCH (6252) P/O PROBE HARNESS SWITCH & LIGHT ASSY	LEFT SIDE FS220	LIMIT SWITCH	LOCKED- SWITCHED 115VAC JB UNLOCKED = OPEN	PROBE LITE (60084)	PROBE OUT/LOCKED SWITCH (6252)	Q1P57	INSFD FIG. 44 ZONE 2B	158	SOLID STATE
084	TAXI LITES - ON	LSX084	MASTER LITE CONTROL (713A1)	PILOTS RIGHT SIDE CONSOLE FS225	TOGGLE SWITCH SPDT	ON-SWITCHED 115VAC PA OFF = OPEN	TAXI/LANDING LIGHT (60085)	TAXI (52) SWITCH	Q2P54	INSFD FIG. 44 ZONE 3B	159	SOLID STATE
085	MLG DOWN AND LOCKED	GBX085	MLG DOWN AND LOCKED SWITCH (7553) P/O LANDING GEAR INDICATING SYSTEM	FS342	LIMIT SWITCH	DOWN AND LOCKED- SWITCHED 115VAC 4A UNLOCKED = OPEN	TAXI/LANDING LIGHT (60085)	MLG DOWN AND LOCKED SWITCH (7553)	Q4P22	INSFD FIG. 44 ZONE 4B	159 162 163 288 298 299	SOLID STATE
086	ANTI-COLLISION LITES-ON	LSX086	MASTER LITE CONTROL (713A1)	PILOTS RIGHT SIDE CONSOLE FS225	TOGGLE SWITCH DPDT	ON-SWITCHED CHOPPED 115VAC OFF = OPEN	ANTI- COLLISION LITE	ANTI-COLLISION LITE SWITCH - 58	Q2P55	INSFD FIG. 44 ZONE 3B	160 161 162 163 164 165 166	SOLID STATE
087	MASTER LITE STEADY	LSX087	MASTER LITE CONTROL (713A1)	PILOTS RIGHT SIDE CONSOLE FS225	TOGGLE SWITCH SPDT	STEADY-SWITCHED 115VAC FLASH-SWITCHED CHOPPED 115VAC	TAIL & WING POSITION LITES	MASTER LIGHT STEADY/ FLASH SWITCH - 57	Q2P56	INSFD FIG. 44 ZONE 3A	161 162 163 164 165 166	SOLID STATE
088	TAIL POSITION BRIGHT	LSX088	MASTER LITE CONTROL (713A1)	PILOTS RIGHT SIDE CONSOLE FS225	TOGGLE SWITCH SPDT/CO	BRIGHT-SWITCHED 115VAC	TAIL POSITION LITES	TAIL POSITION SWITCH 56	Q2P57	INSFD FIG. 44 ZONE 3A	161	SOLID STATE
089	TAIL POSITION DIM	LSX089	MASTER LIGHT CONTROL (713A1)	PILOTS RIGHT SIDE CONSOLE FS225	TOGGLE SWITCH SPDT/CO	DIM-SWITCHED 115VAC OFF = OPEN	TAIL POSITION LITES	TAIL POSITION SWITCH 56	Q2P58	INSFD FIG. 44 ZONE 3A	162	SOLID STATE

FIGURE 44 SHEET 2

TABLE I. F-14 SUEBEL SIGNAL TRANSFERS

1 Table Item #	2 Signal Name/Function	3 Identifier Code	4 Signal Source Box Identification	5 Point of Origin	6 Transducer Type	7 Present Signal Characteristics	8 Associated Loads	9 Conventional Switches Being Replaced or Deleted	10 Operational Address	11 Reference Drawings	12 Associated Boolean Equation	13 Conditioning Technique
090	WING POSITION BRIGHT	INS090	MASTER LIGHT CONTROL (713A1)	PILOTS RIGHT SIDE CONSOLE FS225	TOGGLE SWITCH DPDT/CO	BRIGHT-SWITCHED 115VAC OFF = OPEN	WING & SUPP POSITION LITES	WING POSITION SWITCH S5	Q2F59	INSFD FIG. 44 ZONE 3A	163 166	SOLID STATE
091	WING POSITION DIM	INS091	MASTER LIGHT CONTROL (713A1)	PILOTS RIGHT SIDE CONSOLE FS225	TOGGLE SWITCH DPDT/CO	DIM-SWITCHED 115VAC OFF = OPEN	WING & SUPP POSITION LITES	WING POSITION SWITCH S5	Q2F60	INSFD FIG. 44 ZONE 3A	164 165	SOLID STATE
092	WING SWEET > 25°	CK3092	SWITCH ACTUATOR TRANSMITTER (6383) P/O WING SURFACE CONTROL SYSTEM	FS570	LIMIT SWITCH	SWITCHED 28VDC	KILL POSITION LITE (LEFT GLOVE RELAY BOX 773A1)	N/A	05F22	INSFD FIG. 44 ZONE 7A	163 164 165 166	RESISTOR DIVIDER ADAPTER
093	FORMATION LITE ON	LFS093	MASTER LITE CONTROL (713A1)	PILOTS RIGHT SIDE CONSOLE FS225	15 POSITION FRAME WHEEL POSITION "0" POSITION "1" POSITION "2" POSITION "3" POSITION "4" ON-BRT	SWITCHED 28VDC	MULTI CHANNEL LIGHTING CONTROL 56A1	N/A	0A2P3	INSFD FIG. 44 ZONE 3C	167	RESISTOR DIVIDER ADAPTER

FIGURE 11. SHEET 1

TABLE II. P-14 SOLID STATE POWER CONTROLLERS AND DRIVERS

1	2	3	4	5	6	7	8	9	10	11	12
Table Item #	Type of Power Controller	Rating V & I	Associated Loads	Duty Cycle	Load Power Dissipation	P.C. Location	Conventional Devices Being Replaced	Operational Address	Identifier Code	Reference Drawings	Associated Boolean Equations
158	AC - 1 POLE	V=115VAC IB I=5A	PROBE LIGHT (60DSH)				CB16(5A) PROBE LITE (35A) K21 APPROACH LTS (RIGHT GLOVE RELAY BOX 772A1)	0A021	LML158	INSFD FIG. 44 ZONE 2B, 1B	158
159	AC - 1 POLE	V=115VAC IB I=7A	TAXI/LANDING LITE (60DS5)				CB18(7A) TAXI/FORM LT (35A1)	01Q59	LRL159	INSFD FIG. 44 ZONE 4C, 3B 1A	159
160	AC - 1 POLE	V=115VAC IB I=7A	a) FUSELAGE ANTI COLLISION LIGHT b) RIGHT VERTICAL FIN ANTI COLLISION LIGHT (60DS17) c) LEFT VERTICAL FIN ANTI COLLISION LIGHT (60DS18)				CB10(7A) ANTI COLL/SUPP POS/POS LTS (35A1) AC FLASHER (60DS19) K22 EXT LT MASTER NO. 1 RIGHT GLOVE RELAY BOX	01Q12	LML160	INSFD FIG. 44 ZONE 8C, 7C 3B, 2A, 1A	160
161	AC - 1 POLE COULD BE DRIFT CO CONTROLLER ASSOCIATED WITH 162	V=115VAC IB I=5A	TAIL POSITION LITES BRIGHT				CB7(5A) ACM LT/SEAT ADJ STEADY POS LT (35A1)	11Q35	LML161	INSFD FIG. 44 ZONE 11A, 3A 2A, 1A	161
162	AC-1 POLE COULD BE DRIFT CO CONTROLLER ASSOCIATED WITH 161	V=115VAC IB I=5A	TAIL POSITION LITES DIM				CB7(5A) ACM LT/SEAT ADJ STEADY POS LT (35A1)	11Q36	LML162	INSFD FIG. 44 ZONE 11A, 4A 3A, 2A, 1A	162
163	AC-1 POLE COULD BE DRIFT CO CONTROLLER ASSOCIATED WITH 164	V=115VAC IB I=5A	a) LEFT WING POSITION LITE (60DS5) - BRITE b) RIGHT WING POSITION LITE (60DS10) BRITE				K11 POSITION LITE LEFT GLOVE RELAY BOX 772A1 CB33(5A) EXT LT CONT (35A1)	11Q23	LML163	INSFD FIG. 44 ZONE 12B, 12C 8A, 7A, 4A, 3A, 2A, 1A	

FIGURE 11. SHEET 2

TABLE II. P-14 SOLID STATE POWER CONTROLLERS AND DRIVERS

1 Table Item #	2 Type of Power Controller	3 Rating V & I	4 Associated Loads	5 Duty Cycle	6 Load Power Dissipation	7 P.C. Location	8 Conventional Devices Being Replaced	9 Operational Address	10 Identifier Code	11 Reference Drawings	12 Associated Boolean Equations
164	AC - 1 POLE COULD BE DEPUTCO CONTROLLER ASSOCIATED WITH 163	V-115VAC #B I-5A	a) LEFT WING POSITION LITE (600S8) DIM b) RIGHT WING POSITION LITE (600S1D) DIM				CB33(5A) EXT LT CONT (36A4) K11 - POSITION LIT (LEFT GLOVE RELAY BOX 773A1)	11024	LML164	INSFD FIG. 44 ZONE 12B, 12C 8A, 7A, 4A, 3A, 2A, 1A	
165	AC - 1 POLE COULD BE DEPUTCO CONTROLLER ASSOCIATED WITH 166	V-115VAC #B	a) LEFT UPPER & LOWER SUPP. POS. LITE - DIM (600S6, 600S7) b) RIGHT UPPER & LOWER SUPP. POS. LITE - DIM (600S9, 600S11)				K95 STEADY SUPP POSITION LT (LEFT GLOVE RELAY BOX 773A1) CB10(74A) AMTI COLL./ SUPP POS/POS LTS (35A1)	07Q36 03Q47	LML165	INSFD FIG. 44 ZONE 9, 8, 7A, 7B, 4A, 3A, 2A, 1A	
166	AC - 1 POLE COULD BE DEPUTCO CONTROLLER ASSOCIATED WITH 165	V-115VAC #B	a) LEFT UPPER & LOWER SUPP. POSITION LITE - BRITE (600S6, 600S7) b) RIGHT UPPER & LOWER SUPP. POSITION LITE - BRITE (600S9, 600S11)				K95 STEADY SUPP POS LT (LEFT GLOVE RELAY BOX 773A1) CB10(74A) AMTI-COLL/ SUPP POS/POS LTS (35A1)	07Q37 03Q48	LML166	SAME AS 165	
167	AC - 1 POLE	V-115VAC #A	MULTI CHANNEL LIGHTING CONTROL (50A1)				CB18(74A) TAXI/PODM LTS (35A1)	04Q22	LFL167	INSFD FIG. 44 ZONE 1A, 3C 5A	



TABLE III P-14 SCOTEL BOOLEAN EQUATIONS

FIGURE 44 SHEET 1

1 Table Item #	2 Boolean Equation	3 Transducer List Cross Reference	4 Solid State Controller List Cross Reference	5 Bus/Load Management Priority	6 Special Considerations	7 Reference Drawings	8 Equation Description & Notes
158	$LM158 = \overline{LAS048} \bullet$ $QFS043$	048 063	158	2	ESS. NO. 2 BUS	INSPD FIG. 44 ZONE 2B, 1B	PROBE LIGHT - ON - THROTTLE QUADRANT EXTERIOR LITE SWITCH IS ON AND THE PROBE OUT/LOCKED SWITCH IS LOCKED
159	$LM159 = \overline{LAS048} \bullet$ $LR3004 \bullet$ $QFS045$	048 064 065	159	3	R. MAIN BUS	INSPD FIG. 44 ZONE 4C, 3B, 2A, 1A	TAXI/LANDING LITE - ON - THROTTLE QUADRANT EXTERIOR LITE SWITCH IS ON AND TAXI LITE SWITCH IS ON AND NIG DOWN AND LOCKED SWITCH IS IN THE DOWN AND LOCKED POSITION
160	$LM160 = \overline{LAS048} \bullet$ $LR3006$	048 066	160	3	a) R. MAIN BUS b) SEE NOTE 1	INSPD FIG. 44 ZONE 6C, 7C, 3B, 2A, 1A	ANTI COLLISION LITES ON - THROTTLE QUADRANT EXTERIOR LITE SWITCH IS ON AND ANTI COLLISION SWITCH ON NOTE 1: ANTI COLLISION LITES ON REQUIRES LITE FLASH AT 30 ± 10 FLASHES PER MINUTE
161A	$LM161 = \overline{LAS048} \bullet$ $LAS048 \bullet$ $LR3008 \bullet$ $(LR3087 \bullet \cdot LR3087 \bullet$ $LR3006)$	048 066 067 068	161	3	R. MAIN BUS	INSPD FIG. 44 ZONE 11A, 3A, 2A, 1A	TAIL POSITION LITE BRIGHT STEADY - THROTTLE QUADRANT EXTERIOR LITE SWITCH IS - ON AND TAIL POSITION SWITCH - BRIGHT AND STEADY/FLASH SWITCH-STEADY OR STEADY/FLASH SWITCH-FLASH AND ANTI COLLISION LITE SWITCH - ON
161B	$LM161 = \overline{LAS048} \bullet$ $LAS048 \bullet$ $LR3008 \bullet$ $LR3087 \bullet$ $LR3006$	048 066 067 068	161	3	a) R. MAIN BUS b) SEE NOTE 1	SAME AS 161A	TAIL POSITION LITE BRIGHT FLASH - THROTTLE QUADRANT EXTERIOR LITE SWITCH IS-ON AND TAIL POSITION SWITCH-BRIGHT AND STEADY/FLASH SWITCH- FLASH AND ANTI COLLISION LITE SWITCH-OFF NOTE 1: REQUIRES PROCESSOR TIMER AT 30 ± 10 FLASHES/MINUTE
162A	$LM162 = \overline{LAS048} \bullet$ $LAS048 \bullet$ $LR3009 \bullet$ $(LR3087 \bullet \cdot LR3087 \bullet$ $LR3006)$	048 066 067 069	162	3	R. MAIN BUS	SAME AS 161A	TAIL POSITION LITE DIM STEADY - THROTTLE QUADRANT EXTERIOR LITE SWITCH IS - ON AND TAIL POSITION SWITCH - DIM AND STEADY/FLASH SWITCH- STEADY/FLASH SWITCH-FLASH AND ANTI COLLISION LITE SWITCH-ON
162B	$LM162 = \overline{LAS048} \bullet$ $LAS048 \bullet$ $LR3009 \bullet$ $LR3087 \bullet$ $LR3006$	048 066 067 069	162	3	a) R. MAIN BUS b) SEE NOTE 1	SAME AS 161A	TAIL POSITION LITE DIM FLASH - THROTTLE QUADRANT EXTERIOR LITE SWITCH IS - ON AND TAIL POSITION SWITCH-DIM AND STEADY/FLASH SWITCH- FLASH AND ANTI COLLISION LITE SWITCH-OFF



TABLE III F-14 SUBTEL BOOLEAN EQUATIONS

1 Table Item #	2 Boolean Equation	3 Transducer List Cross Reference	4 Solid State Controller List Cross Reference	5 Bus/Load Management Priority	6 Special Considerations	7 Reference Drawings	8 Equation Description & Notes
163A	$INL163 = LNS045 \bullet$ $LNS090 \bullet$ $(LNS087 \bullet \cdot LNS087 \bullet \cdot$ $LNS086)$	048 086 087 090 092	163	3	R. MAIN BUS	INSPD FIG. 44 ZONE 12B, 12C 8A, 7A, 4A, 3A 2A, 1A	LEFT AND RIGHT WING POSITION LITES-BRITE STEADY- THROTTLE QUADRANT EXTERIOR LITE SWITCH-ON AND WING POSITION SWITCH-BRIGHT AND WING SWITCH ACTUATOR TRANSMITTER - < 25° AND MASTER LITE CONTROL SWITCH- STEADY OR MASTER LITE CONTROL SWITCH-FLASH AND ANTI COLLISION LITE SWITCH-ON
163B	$INL163 = LNS045 \bullet$ $LNS090 \bullet$ $(LNS087 \bullet \cdot LNS087 \bullet \cdot$ $LNS086)$	048 086 087 090 092	163	3	a) R. MAIN BUS b) SEE NOTE 1	INSPD FIG. 44 ZONE 12B, 12C 8A, 7A, 4A, 3A 2A, 1A	LEFT AND RIGHT WING POSITION LITES - BRITE FLASH - THROTTLE QUADRANT EXTERIOR LITE SWITCH-ON AND WING POSITION SWITCH-BRIGHT AND WING SWITCH ACTUATOR TRANSMITTER - < 25° AND MASTER LITE CONTROL SWITCH FLASH AND ANTI COLLISION LITE SWITCH-OFF
164A	$INL164 = LNS045 \bullet$ $LNS091 \bullet$ $(LNS087 \bullet \cdot LNS087 \bullet \cdot$ $LNS086)$	048 086 087 091 092	164	3	R. MAIN BUS	INSPD FIG. 44 ZONE 12B, 12C 8A, 7A, 4A, 3A 2A, 1A	LEFT AND RIGHT WING POSITION LITES-DIM STEADY - THROTTLE QUADRANT EXTERIOR LITE SWITCH-ON AND WING POSITION SWITCH-DIM AND WING SWITCH ACTUATOR TRANSMITTER < 25° AND MASTER LITE CONTROL SWITCH- STEADY OR MASTER LITE CONTROL SWITCH-FLASH AND ANTI COLLISION LITE SWITCH-ON
164B	$INL164 = LNS045 \bullet$ $LNS091 \bullet$ $(LNS087 \bullet \cdot LNS087 \bullet \cdot$ $LNS086)$	048 086 087 091 092	164	3	a) R. MAIN BUS b) SEE NOTE 1	INSPD FIG. 44 ZONE 12B, 12C 8A, 7A, 4A, 3A 2A, 1A	LEFT AND RIGHT WING POSITION LITES-DIM FLASH - THROTTLE QUADRANT EXTERIOR LITE SWITCH-ON AND WING POSITION SWITCH-DIM AND WING SWITCH ACTUATOR TRANSMITTER - < 25° AND MASTER LITE CONTROL SWITCH- FLASH AND ANTI COLLISION LITE SWITCH-OFF NOTE 1: REQUIRES PROCESSOR TIMER AT 30 ± 10 FLASH/ MINUTE
165A	$INL165 = LNS091 \bullet$ $LNS048 \bullet$ $(GNS085 \bullet \cdot GNS085 \bullet \cdot$ $CKS092 \bullet \cdot (LNS087 \bullet \cdot$ $LNS087 \bullet \cdot LNS086))$	048 085 086 087 091 092	165	3	R. MAIN BUS	INSPD FIG. 44 ZONE 9, 8, 7A, 7B, 4A, 3A, 2A, 1A	LEFT AND RIGHT UPPER AND LOWER SUPPLEMENTARY POSITION LITES-DIM STEADY - THROTTLE QUADRANT EXTERIOR LITE SWITCH-ON AND WING POSITION SWITCH-DIM AND WING DOWN AND LOCKED OR WING-UNLOCKED AND SWITCH ACTUATOR TRANSMITTER > 25° AND MASTER LITE SWITCH-STEADY OR MASTER LITE SWITCH- FLASH AND ANTI COLLISION LITE SWITCH-ON
165B	$INL165 = LNS091 \bullet$ $LNS048 \bullet$ $(GNS085 \bullet \cdot GNS085 \bullet \cdot$ $CKS092 \bullet \cdot LNS087 \bullet \cdot$ $LNS086)$	048 085 086 087 091 092	165	3	a) R. MAIN BUS b) SEE NOTE 1	INSPD FIG. 44 ZONE 9, 8, 7A, 7B, 4A, 3A, 2A, 1A	LEFT AND RIGHT UPPER AND LOWER SUPPLEMENTARY POSITION LITES-DIM FLASH - THROTTLE QUADRANT EXTERIOR LITE SWITCH-ON AND WING POSITION SWITCH-DIM AND WING-UNLOCKED AND SWITCH ACTUATOR TRANSMITTER - > 25° AND MASTER LITE SWITCH FLASH AND ANTI COLLISION LITE SWITCH-OFF NOTE 1: REQUIRES PROCESSOR TIMER AT 30 ± 10 FLASHES/ minute

TABLE III. F-14 SUSTEL BOOLEAN EQUATIONS

FIGURE 4-4 SHEET 3

1 Table Item #	2 Boolean Equation	3 Transducer List Cross Reference	4 Solid State Controller List Cross Reference	5 Bus/Load Management Priority	6 Special Considerations	7 Reference Drawings	8 Equation Description & Notes
166A	$\overline{LML165} \cdot \overline{LAS048} \cdot \overline{LMS090} \cdot$ $(GDS005 \cdot GDS005 \cdot$ $\overline{GDS042} \cdot \overline{LMS067} \cdot$ $\overline{LMS067} \cdot \overline{LMS066}))$	048 085 086 087 090 092	166	3	R. MAIN BUS	INSFD FIG. 44 ZONE 9, 6, 7A, 7B, 4A, 3A, 2A 1A	LEFT AND RIGHT UPPER AND LOWER SUPPLEMENTARY POSITION LITES-BRIGHT STEADY- THROTTLE QUADRANT EXTERIOR LITE SWITCH-ON AND WING POSITION SWITCH-BRIGHT AND BGL DOWN AND LOCKED ON BGL-UNLOCKED AND SWITCH ACTUATOR TRANSMITTER - > 25° AND MASTER LITE SWITCH-STEADY OR MASTER LITE SWITCH FLASH AND ANTI COLLISION LITE SWITCH-ON
166B	$\overline{LML166} \cdot \overline{LAS048} \cdot \overline{LMS090} \cdot$ $\overline{LAS048} \cdot \overline{GDS005} \cdot \overline{GDS042} \cdot$ $\overline{LMS067} \cdot \overline{LMS066}$	048 085 086 087 090 092	166	3	a) R. MAIN BUS b) SEE NOTE 1	INSFD FIG. 44 ZONE 9, 6, 7A, 7B, 4A, 3A, 2A, 1A	LEFT AND RIGHT UPPER AND LOWER SUPPLEMENTARY POSITION LITES BRIGHT FLASH - THROTTLE QUADRANT EXTERIOR LITE SWITCH-ON AND WING POSITION SWITCH BRIGHT AND BGL-UNLOCKED AND SWITCH ACTUATOR TRANSMITTER - > 25° AND MASTER LITE SWITCH FLASH AND ANTI COLLISION LITE SWITCH-OFF NOTE 1: REQUIRES PROCESSOR TIMER AT 30 ± 10 FLASH/ MINUTE
167	$\overline{LFL167} \cdot \overline{LAS048} \cdot$ $\overline{LFS093}$	048 093	167	3	R. MAIN BUS	INSFD FIG. 44 ZONE 5A, 3C, 1A	FORMATION LITES - ON (115VAC 6A) TO THE MULTI CHANNEL LIGHTING CONTROL- THROTTLE QUADRANT EXTERIOR LITE SWITCH-ON AND FORMATION THUMBWHEEL SWITCH ON POSITIONS 1 THRU 14

FIGURE 4.5 SHEET 1

TABLE I. P-14 SOSTEL SIGNAL TRANSDUCERS

1 Table Item #	2 Signal Name/Function	3 Identifier Code	4 Signal Source Box Identification	5 Point of Origin	6 Transducer Type	7 Present Signal Characteristics	8 Associated Loads	9 Conventional Switches Being Replaced or Deleted	10 Operational Address	11 Reference Drawings	12 Associated Boolean Equation	13 Conditioning Technique
500	INSTRUMENT LITTING-ON R1	LHS500	D/L REPLY - INSTR LIGHT CONTROL PANEL (724A1)	NFO'S RIGHT SIDE CONSOLE FS300	SEPT - P/O INSTR. BRT CONTROL R1	OPEN/115VAC, 400 Hz φB	NFO INSTR LIGHT CONTROL CHANNEL 7 - P/O MULTI CHANNEL LIGHTING CONTROL (56A1)	N/A	04P24	INSFD FIG. 4.5 ZONE 4A, 3A, 2A	505 531	RESISTOR DIVIDER ADAPTER
501	WHITE FLOOD - DIN	LHS501	D/L REPLY - INSTR LIGHT CONTROL PANEL (724A1)	NFO'S RIGHT SIDE CONSOLE FS300	SEPT - TOGGLE P/O WHITE FLOOD S2	OPEN/115VAC, 400 Hz φB	NFO WHITE FLOOD LIGHT CONTROL CHANNEL 9 P/O MULTI CHANNEL LIGHTING CONTROL (57A1)	N/A	04P25	INSFD FIG. 4.5 ZONE 3B	506 531	RESISTOR DIVIDER ADAPTER
502	WHITE FLOOD - BRT	LHS502	D/L REPLY - INSTR LIGHT CONTROL PANEL (724A1)	NFO'S RIGHT SIDE CONSOLE FS300	SAME AS 501	SAME AS 501 φB	SAME AS 501	N/A	04P26	INSFD FIG. 4.5 ZONE 3B	506 531	RESISTOR DIVIDER ADAPTER
503	CONSOLE LITTING-ON	LHS503	D/L REPLY - INSTR LIGHT CONTROL PANEL (724A1)	NFO'S RIGHT SIDE CONSOLE FS300	DPDT - P/O CONSOLE LIGHTING CONTROL R2	OPEN/115VAC, 400 Hz φA, φC	NFO RED FLOOD LIGHT CONTROL CHANNEL 10 - P/O MULTI CHANNEL LIGHTING CONTROL (56A1)	N/A	04P27	INSFD FIG. 4.5 ZONE 3B	507 508	RESISTOR DIVIDER ADAPTER
504	ACM - Q8	LHS504	MASTER LIGHT CONTROL PANEL (713A1)	PILOT'S RIGHT SIDE CONSOLE FS-25	DPDT - P/O ACM CONTROL R1	OPEN/115VAC 400 Hz φB +28VDC/OPEN	ACM PANEL (702A1) ACM PANEL LIGHT CONTROL CHANNEL 2	N/A	01P58	INSFD FIG. 4.5 ZONE 8A, 7A, 5A	510 515	RESISTOR DIVIDER ADAPTER
505	INSTRUMENT R3 ON	LHS505	MASTER LIGHT CONTROL PANEL (713A1)	PILOT'S RIGHT SIDE CONSOLE FS225	SEPT - P/O INSTRUMENT R3	OPEN/115VAC 400 Hz φB	PILOT INSTRUMENT LIGHT CONTROL CHANNEL 1	N/A	02P61	INSFD FIG. 4.5 ZONE 7A, 5B	511 530	RESISTOR DIVIDER ADAPTER

TABLE 1. F-14 SUGGESTED SIGNAL TRANSDUCERS

1 Table Item #	2 Signal Name/Function	3 Identifier Code	4 Signal Source Box Identification	5 Point of Origin	6 Transducer Type	7 Present Signal Characteristics	8 Associated Loads	9 Conventional Switches Being Replaced or Deleted	10 Operational Address	11 Reference Drawings	12 Associated Boolean Equation	13 Conditioning Technique
506	WHITE FLOOD - OFF	LRS506	MASTER LIGHT CONTROL PANEL (713A1)	PILOTS RIGHT SIDE CONSOLE F5225	SPST - P/O WHITE FLOOD S2	115VAC 400 Hz AB/OFFEN	PILOT WHITE FLOOD LIGHT CONTROL CHANNEL 4	N/A	OAP28	IWSFD FIG. 45 ZONE 7B, 5B	512 530	RESISTOR DIVIDER ADAPTER
507	CONSOLE RM -ON	LRS507	MASTER LIGHT CONTROL PANEL (713A1)	PILOTS RIGHT SIDE CONSOLE F5225	DPDT - P/O CONSOLE RM CONSOLE	OPEN/115VAC 400 Hz RA, RB	PILOT CONSOLE LIGHT CHANNEL 3 PILOT RED FLOOD LIGHT CONTROL CHANNEL 6	N/A	OAP29	IWSFD FIG. 45 ZONE 7C, 7B 5B	513 514	RESISTOR DIVIDER ADAPTER
508	ACM RM - OFF	LRS508	MASTER LIGHT CONTROL PANEL (713A1)	PILOTS RIGHT SIDE CONSOLE F5225	DPDT-P/O ACM CONTROL RM	26VAC/0-26VAC	ACM PANEL (70CA1)	N/A	OAP30	IWSFD FIG. 45 ZONE 8A, 7A 5A	515	RESISTOR DIVIDER ADAPTER



FIGURE 4-5 SHEET 1

TABLE II. P-14 SOLID STATE POWER CONTROLLERS AND DRIVERS

1 Table Item #	2 Type of Power Controller	3 Rating V & I	4 Associated Loads	5 Duty Cycle	6 Load Power Dissipation	7 P.C. Location	8 Conventional Devices Being Replaced	9 Operational Address	10 Identifier Code	11 Reference Drawings	12 Associated Boolean Equations
505	AC - 1 POLE	V-115VAC 400 Hz ØB	NFO INSTRUMENT LIGHT CONTROL CHANNEL 7 P/O MULTICHANNEL LIGHTING CONTROL (56A1)				P/O INSTRUMENT RI - D/L REPLY - INSTR LIGHT CONTROL PANEL (72A1) CB5(5A) INST LTS - P/O 7 AC R MAIN CIRCUIT BREAKER PANEL (35A1)	04Q23	LHL505	INSPD FIG. 4-5 ZONE 4A, 3A 1A	505
506	AC - 1 POLE	V-115VAC 400 Hz ØB	NFO WHITE FLOOD LIGHT CONTROL CHANNEL 9 P/O MULTICHANNEL LIGHTING CONTROL (56A1)				P/O WHITE FLOOD 52- D/L REPLY-INSTR LIGHT CONTROL PANEL (72A1) CB15(5A) WHITE FLOOD LT- P/O 7 AC R MAIN CIRCUIT BREAKER PANEL (35A1)	04Q24	LHL506	INSPD FIG. 4-5 ZONE 4B, 3B 1A	506
507	AC - 1 POLE	V-115VAC 400 Hz ØA	NFO CONSOLE LIGHT CHANNEL 2 P/O MULTICHANNEL LIGHTING CONTROL (56A1)				P/O CONSOLE R2- D/L REPLY INTC LIGHT CONTROL PANEL (72A1) CB9(5A) NFO CONSOLE LT P/O 7 AC R MAIN CIRCUIT BREAKER PANEL (35A1)	04Q25	LHL507	INSPD FIG. 4-5 ZONE 4B, 3B, 1B	507
508	AC - 1 POLE	V-115VAC 400 Hz, ØC	NFO RED FLOOD LIGHT CONTROL CHANNEL 10 P/O MULTICHANNEL LIGHTING CONTROL (56A1)				P/O CONSOLE R2 - D/L REPLY-INSTR LIGHT CONTROL PANEL (72A1) CB3 (5A) RED FLOOD LT P/O 4 AC ESS 1 CIRCUIT BREAKER PANEL (35A3)	04Q26	LHL508	INSPD FIG. 4-5 ZONE 4C, 3B, 1C	508
509	AC - 1 POLE	V-115VAC 400 Hz, ØC	UTILITY/MAF LIGHTS TRANSFORMER (56T1)	100%			CB10 (5A) UTILITY LT P/O 3AC ESS 2 ØB & C CIRCUIT BREAKER PANEL (35A4)	03Q31	LHL509	INSPD FIG. 4-5 ZONE 1C	509
510	AC - 1 POLE	V-115VAC 400 Hz, ØB	ACM PANEL LIGHT CONTROL CHANNEL 2				P/O ACM - RI MASTER LIGHT CONTROL PANEL (713A1) CB7 (5A) - ACM LT/SEAT ADJ/STEADY POS LT P/O 7AC R MAIN CIRCUIT BREAKER PANEL (35A1)	03Q32	LHL510	INSPD FIG. 4-5 ZONE 7A, 5A, 1A	510



FIGURE 15 SHEET 2

TABLE II P-13 SOLID STATE POWER CONTROLLERS AND DRIVERS

1	2	3	4	5	6	7	8	9	10	11	12
Index	Type of Controller	Rating V & I	Associated Loads	Duty Cycle	Load Type Description	P.C. Location	Conventional Devices Being Replaced	Operational Address	Identifier Code	Reference Drawings	Associated Boolean Equations
511	AC - 1 POLE	V = 115VAC 400 HZ, ØB	PILOT INSTRUMENT LIGHT CONTROL CHANNEL 1				P/O INSTRUMENT - RB MASTER LIGHT CONTROL PANEL (713A) CDS (5A) INST LTS	04Q27	LHL511	INSPD FIG. 45 ZONE 7B, 5A, 1A	511
512	AC - 1 POLE	V = 115VAC 400 HZ, ØB	PILOT WHITE FLOOD LIGHT CONTROL CHANNEL 4				P/O 7AC R MAIN CIRCUIT BREAKER PANEL (35A1) P/O WHITE FLOOD S2 MASTER LIGHT CONTROL PANEL (713A1) CB15 (5A) WHITE FLOOD LT	04Q28	LHL512	INSPD FIG. 45 ZONE 7B, 5B, 1A	512
513	AC - 1 POLE	V = 115VAC 400 HZ, ØB	PILOT CONSOLE LIGHT CONTROL CHANNEL 3				P/O 7AC R MAIN CIRCUIT BREAKER PANEL (35A1) P/O CONSOLE #4 MASTER LIGHT CONTROL PANEL (713A1) CB8(5A) PILOT CONSOLE LT	04Q29	LHL513	INSPD FIG. 45 ZONE 7B, 5B, 1B	513
514	AC - 1 POLE	V = 115VAC 400 HZ, ØB	PILOT RED FLOOD LIGHT CONTROL CHANNEL 6				P/O 7 AC R MAIN CIR- CUIT BREAKER PANEL (35A1) P/O CONSOLE #4 MASTER LIGHT CONTROL PANEL (713A1) CB 3 (5A) RED FLOOD LT	04Q30	LHL514	INSPD FIG. 45 ZONE 7C, 5B, 1C	514
515	AC - 1 POLE	V = 265VAC	ACM PANEL (705A1)				P/O 4AC ESS 1 CIRCUIT BREAKER PANEL (35A3) P/O ACM RI MASTER LIGHT CONTROL PANEL (713A1) CB5 (3A) INS SYNC/ACM PRL LTS	09Q37	LHL515	INSPD FIG. 45 ZONE 6A, 5A, 1B	515

TABLE II. P-14 SOLID STATE POWER CONTROLLERS AND DRIVERS

1 Table Item #	2 Type of Power Controller	3 Rating V & I	4 Associated Loads	5 Duty Cycle	6 Load Power Dissipation	7 P.C. Location	8 Conventional Devices Being Replaced	9 Operational Address	10 Identifier Code	11 Reference Drawings	12 Associated Boolean Equations
515 (cont'd)							P/O 3AC ESS 2 480 & C CIRCUIT BREAKER PANEL (350A)				
516	AC - 1 POLE	V = 26WAC	ACM PANEL (702A1)	100%			CB5 (3A) INS SYNC/ ACM PNL LTS P/O 3 AC ESS 240 & C CIRCUIT BREAKER PANEL (350A)	03Q38	LIB516	INSPD FIG 4-5 ZONE 8A, 1B	516

TABLE III F-14 SUSTEL BOOLEAN EQUATIONS

1	2	3	4	5	6	7	8
Table Item #	Boolean Equation	Transducer List Cross Reference	Solid State Controller List Cross Reference	Bus/Load Management Priority	Special Considerations	Reference Drawings	Equation Description & Notes
505	LHS505 = LHS500	500	505	3	a) R. MAIN BUS b) PART OF POTENTIAL METER	INSPD FIG. 45 ZONE 4A, 3A, 1A	NFO INSTRUMENT LIGHT CONTROL CHANNEL 7-ON = INSTRUMENT R1 - ON AND 115VAC 400 HZ, R MAIN BUS PH. B - ON
506	LHS506 = LHS501 + LHS500	501 502	506	3	R. MAIN BUS	INSPD FIG. 45	NFO WHITE FLOOD LIGHT CONTROL CHANNEL 9 - ON = WHITE FLOOD S2 (DIM OR BRIGHT) AND 115VAC 400 HZ, R MAIN BUS PH. B - ON
507	LHS507 = LHS503	503	507	3	a) R. MAIN BUS b) PART OF POTENTIAL METER	INSPD FIG. 45 ZONE 4B, 3B, 1B	NFO CONSOLE LIGHT CONTROL CHANNEL 8 - ON = CONSOLE R2 - ON AND 115VAC 400 HZ R MAIN BUS PH. A - ON
508	LHS508 = LHS503	503	508	1	a) ESS. NO. 1 BUS b) PART OF POTENTIAL METER	INSPD FIG. 45	NFO RED FLOOD LIGHT CONTROL CHANNEL 10 - ON = CONSOLE R2 - ON AND 115VAC 400 HZ ESS NO. 1 BUS PH. C - ON
509	LHS509	N/A	509	2	ESS. NO. 2 BUS	INSPD FIG. 45 ZONE 1C	UTILITY/MAP LIGHTS TRANSFORMER (50T1) - ON = 115VAC 400 HZ ESS NO. 2 BUS PH. C - ON
510	LHL 510 = LHS504	504	510	3	a) R. MAIN BUS b) PART OF POTENTIAL METER	INSPD FIG. 45 ZONE 7A, 5A, 1A	ACM PANEL LIGHT CONTROL CHANNEL 2 - ON = ACM R1 - ON AND 115VAC 400 HZ R MAIN BUS PH. B - ON
511	LHL 511 = LHS505	505	511	3	a) R. MAIN BUS b) PART OF POTENTIAL METER	INSPD FIG. 45 ZONE 7B, 5A, 1A	PILOT INSTRUMENT LIGHT CONTROL CHANNEL 1 - ON = INSTRUMENT R3 - ON AND 115 VAC 400 HZ R MAIN BUS PH. B - ON
512	LHL 512 = LHS506	506	512	3	R. MAIN BUS	INSPD FIG. 45 ZONE 7B, 5B, 1A	PILOT WHITE FLOOD LIGHT CONTROL CHANNEL 4 - ON = WHITE FLOOD S2 (DIM OR BRIGHT) AND 115VAC 400 HZ R MAIN BUS PH. B - ON
513	LHL 513 = LHS507	507	513	3	a) R. MAIN BUS b) PART OF POTENTIAL METER	INSPD FIG. 45 ZONE 7B, 5B, 1B	PILOT CONSOLE LIGHT CONTROL CHANNEL 3-ON = CONSOLE R4 - ON AND 115 VAC 400 HZ R MAIN BUS PH. A - ON

TABLE III P-14 SOSTEL BOOLEAN EQUATIONS

1 Table Item #	2 Boolean Equation	3 Transducer List Cross Reference	4 Solid State Controller List Cross Reference	5 Bus/Load Management Priority	6 Special Considerations	7 Reference Drawings	8 Equation Description & Notes
514	$LH-514 = LHS-507$	507	514	1	a) ESS. NO. 1 BUS b) PART OF POTENTIAL METER	INSPD FIG. 45 ZONE 7C, 5B, 1C	PILOT RED FLOOD LIGHT CONTROL CHANNEL 6 - ON - CONSOLE RA - ON AND 115VAC 400 HZ ESS NO. 1 BUS PH. C - ON
515	$LH-515 = LHS-504$ $+LHS-508$	504 508	515	3	a) R. MAIN BUS b) PART OF POTENTIAL METER	INSPD FIG. 45	ACM PANEL LIGHTING - ON = (ACM RL - ON AND 115VAC 400 HZ R MAIN BUS PH. B - ON) OR (ACM RL - OFF AND 26VAC NAV BUS - ON)
516	$LH-516$	N/A	516	2	NAV BUS	INSPD FIG 45 ZONE 8A, 1B	ACM PNL DWR - ON = 26VAC NAV BUS - ON

FIGURE 46 SHEET 1

TABLE I F-14 SYSTEM SIGNAL TRANSDUCERS

1 Table Item #	2 Signal Name/Function	3 Identifier Code	4 Signal Source Box Identification	5 Point of Origin	6 Transducer Type	7 Present Signal Characteristics	8 Associated Loads	9 Conventional Switches Being Replaced or Deleted	10 Operational Address	11 Reference Drawings	12 Associated Boolean Equation	13 Conditioning Technique
518	1ND LT - ON	DUS518	TEST PANEL (720A1)	NFO RIGHT SIDE COM- SOLE FS300	SPST TOGGLE	OPEN/+28VDC	LAMP TEST P/O NFO CAUTION ADV 1ND (69A2A1)	S2 TEST PANEL (720A1)	OAP31	1WSFD FIG. 46 ZONE 13C	532	SOLID STATE
519	R AUTO/STOW - STOW	KAS519	INLET RAMPS/ENG CRANK/THROTTLE COM- TRAIL PANEL (710A1)	PILOTS LEFT SIDE CONSOLE FS225	DPDT TOGGLE	OPEN/+28VDC	R RAMPS CAUTION LIGHT (69A1)	R INLET RAMPS (710A1)	05D32	1WSFD FIG. 4 ZONE 21B	539	EXTERNAL SIGNAL ADAPTER
520	L AUTO/STOW - STOW	KAS520	INLET RAMPS/ENG CRANK/THROTTLE COM- TRAIL PANEL (710A1)	PILOTS LEFT SIDE CONSOLE FS225	DPDT TOGGLE	OPEN/+28VDC	L RAMP CAUTION LIGHT (69A1)	L INLET RAMPS (710A1)	05D33	1WSFD FIG. 4 ZONE 21C	540	EXTERNAL SIGNAL ADAPTER
521	FIRST R COM- SW - NOT STOW	KCS521	FIRST RIGHT COM- PRESSION RAMP STOW SWITCH (3286)	RIGHT SIDE FS375	SPST LIMIT SWITCH	OPEN/+28VDC	R RAMPS CAUTION LIGHT (69A1)	FIRST RIGHT COM- PRESSION RAMP STOW SWITCH (3286)	OAP32	1WSFD FIG. 4 ZONE 24A	539	SOLID STATE
522	SECOND R COM- SW - NOT STOW	KCS522	SECOND RIGHT COM- PRESSION RAMP STOW SWITCH (3287)	RIGHT SIDE FS375	SPST LIMIT SWITCH	OPEN/+28VDC	R RAMPS CAUTION LIGHT (69A1)	SECOND RIGHT COM- PRESSION RAMP STOW SWITCH (3287)	OAP33	1WSFD FIG. 4 ZONE 24A	539	SOLID STATE
523	FIRST R TRAIL- NOT TRAIL	KCS523	FIRST RIGHT COM- PRESSION RAMP TRAIL SWITCH (3285)	RIGHT SIDE FS375	SPST LIMIT SWITCH	OPEN/+28VDC	R RAMPS CAUTION LIGHT (69A1)	FIRST RIGHT COM- PRESSION RAMP TRAIL SWITCH (3285)	OAP34	1WSFD FIG. 4 ZONE 24B	539	SOLID STATE
524	FIRST L COM- SW - NOT STOW	KCS524	FIRST LEFT COM- PRESSION RAMP STOW SWITCH (3282)	LEFT SIDE FS375	SPST LIMIT SWITCH	OPEN/+28VDC	L RAMPS CAUTION LIGHT (69A1)	FIRST LEFT COM- PRESSION RAMP STOW SWITCH (3282)	03P29	1WSFD FIG. 4 ZONE 24B	540	SOLID STATE
525	SECOND L COM- SW - NOT STOW	KCS525	SECOND LEFT COM- PRESSION RAMP STOW SWITCH (3283)	LEFT SIDE FS375	SPST LIMIT SWITCH	OPEN/+28VDC	L RAMPS CAUTION LIGHT (69A1)	SECOND LEFT COM- PRESSION RAMP STOW SWITCH (3283)	03P23	1WSFD FIG. 4 ZONE 24C	540	SOLID STATE



FIGURE 46 SHEET 2

TABLE I F-14 SUBTEL SIGNAL TRANSDUCERS

1 Table Item #	2 Signal Name/Function	3 Identifier Code	4 Signal Source Box Identification	5 Point of Origin	6 Transducer Type	7 Present Signal Characteristics	8 Associated Loads	9 Conventional Switches Being Replaced or Deleted	10 Operational Address	11 Reference Drawings	12 Associated Boolean Equation	13 Conditioning Technique
526	FIRST L TAIL - NOT TAIL	KCS26	FIRST LEFT COMPRES- SION RAMP TRAIL SWITCH (32S1)	LEFT SIDE PS375	SPRT LIMIT SWITCH	OPEN/+28VDC	L. RAMP CAUTION LIGHT (69A1)	FIRST LEFT COMPRES- SION RAMP TRAIL SWITCH (32S1)	0524	INSFD FIG. 4 ZONE 24C	540	SOLID STATE
527	WING SNEEP DETENT SW ENGAGED	CKS27	WING SNEEP/FLAP AND SLAT CONTROL BOX (50A2)	PS540 ML175	DETENT ACTUATED LIMIT SWITCH	OPEN/+28VDC	K94 WING SNEEP DE- TENT P/O RHB (772A1)	DETENT POSITION SWITCH P/O (50A2)	0525	INSFD FIG. 2 ZONE 25B	541	RESISTOR DIVIDER ADAPTER
528	LEFT WING SEAL DUMP VALVE - OPEN	QAS28	LEFT WING SEAL DUMP VALVE (50L3)	LEFT SIDE PS650	SOLENOID OPERATED CONTACTS	OPEN/+28VDC	K69 WING SNEEP ACT. INTX (RHB 772A1)	LEFT WING SEAL DUMP VALVE SW (50L3)	0639	INSFD FIG. 2A ZONE 43A	543	RESISTOR DIVIDER ADAPTER
529	RIGHT WING SEAL DUMP VALVE - OPEN	QAS29	RIGHT WING SEAL DUMP VALVE (50L2)	RIGHT SIDE PS650	SOLENOID OPERATED CONTACTS	OPEN/+28VDC	K69 WING SNEEP ACT. INTX (RHB 772A1)	RIGHT WING SEAL DUMP VALVE SE (50L2)	0739	INSFD FIG. 2A ZONE 43C	543	RESISTOR DIVIDER ADAPTER
530	GEN CONTROL - NORM	POS30	MASTER GEN CONTROL PANEL (716A1)	PILOTS RIGHT SIDE CON- SOLE PS225	DEPT SPRING LOADED TO ONE SIDE TOGGLE	OPEN/28VDC	K2 AC R MAIN PWR CONTACT- OR (P/O) 66A6) R VOLT REG (66A2)	R (S2) P/O MASTER GEN CON- TROL PANEL (716A1)	0435	INSFD FIG. 43 ZONE 6A, 7A	544	SOLID STATE
531	R. GEN CON- TROL - TEST	POS31	MASTER GEN. CONTROL PANEL (716A1)	PILOTS RIGHT SIDE CON- SOLE PS225	DEPT SPRING LOAD- ED TOGGLE	OPEN/28VDC	RIGHT WOLT- AGE REG. CONTROL (66A2) TEST RELAY	MASTER GEN CONTROL PANEL (716A1) R (S2)	0436	INSFD FIG. 43 ZONE 6A	545 546	SOLID STATE
532	R. GEN CONT PWR - ON	POS32	R VOLTAGE REG CONT (66A2) GEN CONTROL RELAY	LEFT SIDE PS375	N/A	OPEN/28VDC	TEST RELAY P/O (66A2)	N/A	0534	INSFD FIG. 43 ZONE 6A	544 545 546	EXTERNAL SIGNAL ADAPTER
533	L. GEN CON- TROL - NORM	POS33	MASTER GEN CONTROL PANEL (716A1)	PILOTS RIGHT SIDE CON- SOLE PS225	DEPT SPRING LOAD- ED TO ONE SIDE TOGGLE	OPEN/28VDC	K1 AC L MAIN PWR CON- TROL (66A6) L VOLTAGE REG (66A1)	L (S1) MASTER GEN CONT PANEL (716A1)	0437	INSFD FIG. 43 ZONE 6C, 7B	547	SOLID STATE

TABLE 1 P-14 SYSTEM SIGNAL TRANSDUCERS

1 Table Item #	2 Signal Name/Function	3 Identifier Code	4 Signal Source Box Identification	5 Point of Origin	6 Transducer Type	7 Present Signal Characteristics	8 Associated Loads	9 Conventional Switches Being Replaced or Deleted	10 Operational Address	11 Reference Drawings	12 Associated Boolean Equation	13 Conditioning Technique
534	L. GEN CONTROL TEST	P05534	MASTER GEN CONTROL PANEL (716A1)	PILOTS RIGHT SIDE COM- SOLE FS225	DPST SPRING LOADED TOGGLE	OPEN/28VDC	LEFT VOLT- AGE REG COM- TROL (66A1) TEST RELAY	MASTER GEN CONTROL PANEL (716A1) L(S1)	04738	INSFD FIG. 43 ZONE 6C	448 949	SOLID STATE
535	L. GEN CONT PWR - ON	P05535	L. VOLTAGE REG. CONT (66A1)	LEFT SIDE FS375	N/A	OPEN/28VDC	TEST RELAY P/O (66A1)	N/A	05035	INSFD FIG. 43 ZONE 6C	547 548 549	EXTERNAL SIGNAL ADAPTER
536	R. RECTIFIER PWR-ON	P05536	R. VOLTAGE REG. CONT (66A2)	LEFT SIDE FS375	N/A	OPEN/28VDC	RIGHT VOLT- AGE REG. CONTROL (66A2)	N/A	05036	INSFD FIG. 43 ZONE 5B	544 545 546	EXTERNAL SIGNAL ADAPTER
537	L. RECTIFIER PWR - ON	P05537	L. VOLTAGE REG. CONT (66A1)	LEFT SIDE FS375	N/A	OPEN/28VDC	66A1	N/A	05037	INSFD FIG. 43 ZONE 5C	547 548 549	EXTERNAL SIGNAL ADAPTER
538	R. DC PWR - ON	PAS538	R. XPNR-RECT (677E)	FSU05	N/A	GND/+28V	K1 R MAIN DC PWR CONTACT- TOR (67A3)	N/A	07030	INSFD FIG. 43 ZONE 10A	550	EXTERNAL SIGNAL ADAPTER
539	L. DC PWR - ON	PAS539	L. XPNR-RECT (677E)	FS395	N/A	GND/+28V	K2 L MAIN DC PWR CONTACT- TOR (67A3)	N/A	05038	INSFD FIG. 43 ZONE 10C, 10B	550 585	EXTERNAL SIGNAL ADAPTER
540	L. ENGINE OIL PRESSURE - LOW	EP540	L. ENGINE OIL PRESSURE SW (70A2)	L. ENGINE FS700	SPST PRES- SURE SWITCH	OPEN/GND	OIL PRESS INDIC (69A1)	N/A	06940	NAVAIR 01- FL4AAA-2-2- 6-006 FIG. 2	551	RESISTOR DIVIDER ADAPTER
541	R. ENGINE OIL PRESSURE - LOW	EP541	R. ENGINE OIL PRESSURE SW (70A2)	R. ENGINE FS700	SPST PRES- SURE SWITCH	OPEN/GND	OIL PRESS INDIC (69A1)	N/A	07940	NAVAIR 01- FL4AAA-2-2- 6-006 FIG. 2	551	RESISTOR DIVIDER ADAPTER
543	ICE PROBE - ON	MAS543	ICE-DETECTOR 39A1	LEFT IN- LET DUCT FS520 BL 61.5	N/A	28VDC/OPEN	ENGINE ANTI- ICE RELAY K4 R08A (772A1)	N/A	05039	NAVAIR 01- FL4AAA-2-2- 6-013 FIG. 2	553	EXTERNAL SIGNAL ADAPTER

FIGURE 46, SHEET 4

TABLE 1. F-14 SUSTEL SIGNAL TRANSDUCERS

1 Table Item #	2 Signal Name/Function	3 Identifier Code	4 Signal Source Box Identification	5 Point of Origin	6 Transducer Type	7 Present Signal Characteristics	8 Associated Loads	9 Conventional Switches Being Replaced or Deleted	10 Operational Addresses	11 Reference Drawings	12 Associated Boolean Equation	13 Conditioning Technique
944	CANOPY SW - OPEN	DHS944	CANOPY SW - 70S1	FS394	SPST LIMIT SWITCH	OPEN/+28V	CANOPY LIGHT P/O PILOT & NFO CAUTION/ ADVISORY IND (69A1, 69A2)	CANOPY SW (70S1)	03F30	NAVAIR-01- FL444A-2-2- 2-020 FIG. 2	554	SOLID STATE
945	PILOT OX PR - LOW	WHS945	OXYGEN PRESSURE WARNING SW (PILOT) 41S1	FS256	SPST PRES- SURE	OPEN/+28V	PILOT & NFO OXY LOW LAMP (69A1, 69A2)	PILOT OXY PRESS. SW (41S1)	03F31	NAVAIR-01- FL444A-2-2- 2-019 FIG. 2	555	SOLID STATE
946	NFO OX PR - LOW	WHS946	OXYGEN PRESSURE WARNING SW (NFO) 41S2	FS322	SPST PRES- SURE	OPEN/+28V	PILOT & NFO OXYGEN LAMP (69A1, 69A2)	NFO OXY PRESS. SW (41S2)	03F32	NAVAIR-01- FL444A-2-2- 2-019 FIG. 2	555	SOLID STATE
947	BOARDING LAU- DER - DN	DAS947	BOARDING LADDER WARNING SWITCH (70S2)	BOARDING LADDER LEFT SIDE FS281	SPST LIMIT	OPEN/+28VDC	LADDER LIGHT (69A1)	70S2 BOARDING LADDER SW	03F33	NAVAIR 01- FL444A-2-2- 2-008 FIG. 2	556	SOLID STATE
948	COOLING AIR - OVERHEAT	HBS948	COOLING EFFECT CONTROLLER (44A1)	FS240	OVERHEAT RELAY CONTACTS	GND/+28VDC	OVERHEAT RELAY K2 (44A1)	N/A	03F34	INSFD FIG. 32 ZONE 35A, 36A	557	RESISTOR DIVIDER ADAPTER
949	RADAR TEST EN- RADIATE & SCAN	SUS949	RADAR TEST ENABLE CONT. PANEL (27A37)	FS215	N/A	OPEN/+28V	COOLING AIR IND (P/O 69A2) RADAR EN LAMP (69A2)	N/A	07D31	NAVAIR-01- FL444A-2-2- 16A FIG. 5	558 736 739	EXTERNAL SIGNAL ADAPTER

TABLE I. F-14 SCOTEL SIGNAL TRANSDUCERS

FIGURE 16 SHEET 5

1 Table Item #	2 Signal Name/Function	3 Identifier Code	4 Signal Source Box Identification	5 Point of Origin	6 Transducer Type	7 Present Signal Characteristics	8 Associated Loads	9 Conventional Switches Being Replaced or Deleted	10 Operational Address	11 Reference Drawings	12 Associated Boolean Equation	13 Conditioning Technique
015	R-AUCS HYDR-ON	DIES015	RIGHT AIR INLET CONTROL PROGRAMMER (32A7) (HYDRAULICS ON SIGNAL)		N/A	GND/OPEN	K59-R AUCS HYD PRESS SOL (TIME DELAY) (RIGHT GLOVE RELAY BOX 772A1)	N/A	07D32	1WSFD FIG. 4 ZONE 16A	539	EXTERNAL SIGNAL ADAPTER
579	R-AUCS-28VDC	DIES579	RIGHT AIR INLET CONTROL PROGRAMMER (32A7) (K59-28VDC)		N/A	28VDC	K59-R AUCS HYD PRESS SOL (TIME DELAY) (RIGHT GLOVE RELAY BOX 772A1)	N/A	07D33	1WSFD FIG. 4 ZONE 16A	539	EXTERNAL SIGNAL ADAPTER
580	L-AUCS - HYDR-ON	DIES580	LEFT AIR INLET CONTROL PROGRAMMER (32A6) (HYDRAULICS ON SIGNAL)		N/A	GND/OPEN	K56 - L AUCS HYD PRESS SOL (TIME DELAY) (RHB 772A1)	N/A	05D40	1WSFD FIG. 4 ZONE 12A	540	EXTERNAL SIGNAL ADAPTER
581	L-AUCS - 28VDC	DIES581	LEFT AIR INLET CON- TROL PROGRAMMER (32A6) (K56-28VDC)		N/A	28VDC	K56 - L AUCS HYD PRESS SOL (TIME DELAY) RHB 772A1)	N/A	05D41	1WSFD FIG. 4 ZONE 12A	540	EXTERNAL SIGNAL ADAPTER



FIGURE 46. SHEET 1

TABLE II P-34 SOLID STATE POWER CONTROLLERS AND DRIVERS

1 Table Item #	2 Type of Power Controller	3 Rating V & I	4 Associated Loads	5 Duty Cycle	6 Load Power Dissipation	7 P.C. Location	8 Conventional Devices Being Replaced	9 Operational Address	10 Identifier Code	11 Reference Drawings	12 Associated Boolean Equations
529	DC - 1 POLE	V = +28VDC	POWER TRANSFER RELAY & LOGIC CXTS P/O PILOT CAUTION ADVISORY INDICATOR (69A1)				CEB0 TP-ADVSY FLT ANN PML AUX PWR P/O 8 DC ESS 2 CIRCUIT BREAKER PANEL (36A2)	07Q29	VAL529	INSFD FIG. 46 ZONE 3A, 2A	529
530	ENABLE DRIVER	V = +28VDC	DIM SIGNAL - ON P/O PILOT CAUTION ADVISORY INDICATOR (69A1)				P/O WHITE FLOOD S-3 P/O INSTRUMENT R-3 MASTER LIGHT CONTROL PANEL (713A1) CEB3 (5A) DD1/ANN PML DIM CONT 10 DC MAIN CIRCUIT BREAKER PANEL (36A4)	01D34	DUL530	INSFD FIG. 46 ZONE 3B, 2B	530
531	ENABLE DRIVER	V = +28VDC	DIM SIGNAL - ON P/O INFO CAUTION ADVISORY INDICATOR (69A2A1)				P/O WHITE FLOOD SE P/O INSTRUMENT RI D/L REPLY AND INTR LIGHT CONTROL PANEL (72A47) CEB4 (5A) DD1/ANN PML DIM CONT 10 DC MAIN CIRCUIT BREAKER PANEL (36A4)	01D35	DUL531	INSFD FIG. 46 ZONE 14A, 13A, 2B	531
532	ENABLE DRIVER	V = +28VDC	LIGHTS TEST P/O INFO CAUTION ADVISORY INDICATOR (69A2A1)				SE TEST PANEL (720A1) CEB4 (5A) DD1/ANN PML DIM CONT 10 DC MAIN CIRCUIT BREAKER PANEL (36A4)	01D36	DUL532	INSFD FIG. 46 ZONE 13C, 2B	532



TABLE II. P-4 SOLID STATE POWER CONTROLLERS AND DRIVERS

1 Table Item #	2 Type of Power Controller	3 Rating V & I	4 Associated Loads	5 Duty Cycle	6 Load Power Dissipation	7 P.C. Location	8 Conventional Devices Being Replaced	9 Operational Address	10 Identifier Code	11 Reference Drawings	12 Associated Boolean Equations
535	DC - 1 POLE	V = +28VDC	L. AIR INLET COM- TROL PROGRAMMER (3646)				CB16 EMERG GEN TEST/ L. AICS LKUP PWR (3642)	01Q35	KAL535	INSPD FIG. 4 - 9C, 1C	535
536	DC - 1 POLE	V = +28VDC	R. AIR INLET COM- TROL PROGRAMMER (3647)				CB15 ANTI-SMO/R AICS LKUP PWR (3642)	09Q50	KAL536	INSPD FIG. 4 ZONE 13C, 1B	536
539	LAMP DRIVER	V = +28VDC	R. RAMPS CAUTION LIGHT P/O PILOT CAUTION ADVISORY INDICATOR (66A1)				R. STOW & TRAIL SWITCHES (3286, 3287, 3288, 3289) P/O K38 M/G HDL 'G' RGRB (772A1) P/O K59 R AICS HYD PRESS SOL RGRB (772A1) CB2 R AICS (35A6) CB15 R AICS LKUP (3642) CB11 R AICS RAMP (36A1) L. STOW & TRAIL SWITCHES (3281, 3282, 3283, 3284) P/O K90 M/G HDL 'H' LGRB (773A1) P/O K56 L AICS HYD PRESS SOL LGRB (773A1) CB3 L AICS (35A6) CB16 L AICS LKUP (3642) CB12 L AICS RAMP (36A1)	01D37	DUL539	INSPD FIG. 46 ZONE 7A	539
540	LAMP DRIVER	V = +28VDC	L. RAMPS CAUTION LIGHT P/O PILOT CAUTION ADVISORY INDICATOR (66A1)					01D38	DUL540	INSPD FIG. 46 ZONE 7A	540

FIGURE 46 SHEET 3

TABLE II P-14 SOLID STATE POWER CONTROLLERS AND DRIVERS

1 Table Item #	2 Type of Power Controller	3 Rating V & I	4 Associated Loads	5 Duty Cycle	6 Load Power Dissipation	7 P.C. Location	8 Conventional Devices Being Replaced	9 Operational Address	10 Identifier Code	11 Reference Drawings	12 Associated Boolean Equations
541	ENABLE DRIVER	V = GND	P/O K04 WING SWEEP DETENT RGRB (772A1) WING SWEEP INDICA- TOR (26A1)				K04 WING SWEEP DETENT RGRB (772A1) DETENT POSITION SW P/O WING SWEEP/FLAT AND SLAT CONTROL BOX (50A2) CBE WING POS IND DC (36A2) CBE WING POS IND DC (36A2) P/O K68 WING SEAL P/O K12 MELG SAFETY K RGRB (772A1) K69 WING SWEEP ACT. INTLK K73 WING OVERSWEEP FWR K72 680 LOCKOUT RGRB (772A1) HORIZ TAIL RES. AUTH. SW (50S2) AFT STICK AUTH (50S3) P/O THROTTLE QUAD (711A1) HORIZ TAIL AUTH STOP SW (50S1) K32 - MASTER GEN CONTACTOR (K2) (66A6)	01D39	DUL541	INSPD FIG. 2 ZONE 1C, 22A 25B, 36B	541
542	RELAY DRIVER	V = +28VDC	LEFT & RIGHT WING SEAL DUMP VALVES (50L2, 50L3)					07Q38 03Q49	CKL542	INSPD FIG. 2 ZONE 43A, 43C, 36C, 36B, 1C	542
543	LAMP DRIVER	V = 0 VDC (GND/OFFEN)	RZ TAIL AUTH INDIC- ATOR PILOT CAUTION PANEL (69A1)					01D40	DUL543	INSPD FIG. 24 ZONE 36B, 37B, 36A, 36C, 36C, 43A, 43C, 20B, 1C	543
544	RELAY DRIVER	V = +28VDC	AC B. MAIN POWER CONTACTOR (K2) (66A6)					01Q36	PUL544	INSPD FIG. 43 ZONE 7B, 6A	544

TABLE II P-14 SOLID STATE POWER CONTROLLERS AND DRIVERS

1 Table Item #	2 Type of Power Controller	3 Rating V & I	4 Associated Loads	5 Duty Cycle	6 Load Power Dissipation	7 P.C. Location	8 Conventional Devices Being Replaced	9 Operational Address	10 Identifier Code	11 Reference Drawings	12 Associated Boolean Equations
545	RELAY DRIVER	V = +28VDC	R. TEST RELAY P/O R. VOLT REG. CONT (6642)				R(S2) P/O (716A1)		POL545	INSFD FIG. 43 ZONE 6A,	545
546	LAMP DRIVER	V = +28VDC	R. GEN LAMP P/O PILOT CAUTION ADVISORY INDIC. (69A1)				P/O K2 AC R MAIN PWR CONT. (6646) CB11 R. GEN CAUTION (3642)	01D41	DUL546	INSFD FIG. 43 ZONE 7A, 7B	546
547	RELAY DRIVER	V = +28VDC	AC L. MAIN POWER CONTACTOR (K1) (6646)				L(S1) - MASTER GEN CONT PANEL (716A1)	01Q37	POL547	INSFD FIG. 43 ZONE 8B, 6C	547
548	RELAY DRIVER	V = +28VDC	L. TEST RELAY P/O R VOLT REG CONT (66A1)				L(S1) P/O (716A1)	06D31	POL548	INSFD FIG. 43 ZONE 6C	548
549	LAMP DRIVER	V = +28VDC	L. GEN LAMP P/O PILOT CAUTION ADVISORY INDIC (69A1)				P/O K1 AC L MAIN PWR CONT (6646) CB12 L. GEN CAUTION (3642)	01D42	DUL549	INSFD FIG. 43 ZONE 7B, 6C	549
550	LAMP DRIVER	V = +28VDC	TRANS/RECT LAMP P/O PILOT CAUTION ADVISORY INDIC (67A1)				CB10 TR ADJUST/MT ANN PNL AUX PWR (3642)	01D43	DUL550	INSFD FIG. 43 ZONE 12A, 11C, 10B, 10A	550
551	LAMP DRIVER	V = 0 VDC	OIL PRESS LAMP P/O PILOT CAUTION ADVISORY INDIC (69A1)					01D44	EPL551	NAVAIR OL- FL444A-2-2-6 FIG. 2	551
552	LAMP DRIVER	V = +28VDC	LAUNCH BAR LAMP P/O PILOT CAUTION ADVISORY INDIC (69A1)					01D45	GDL552	INSFD FIG. 46 ZONE 11A	552

FIGURE 46 SHEET 5

TABLE II 7-14 SOLID STATE POWER CONTROLLERS AND DRIVERS

1 Table Item #	2 Type of Power Controller	3 Rating V & I	4 Associated Loads	5 Duty Cycle	6 Load Power Dissipation	7 P.C. Location	8 Conventional Devices Being Replaced	9 Operational Address	10 Identifier Code	11 Reference Drawings	12 Associated Boolean Equations
553	LAMP DRIVER	V = +28VDC	INLET ICE LAMP P/O PILOT CAUTION ADVISORY IND (69A1)				P/O ENGINE ANTI-ICE RELAY K4 P/O MSC START 'A' RELAY K3 RCS A (772A1) CBL - (36A3) ENG ANTI-ICE VALVES CBL3 - (36A3) ENG/PROBE ANTI-ICE CBL34 (36A2) CAN/LAD/CAUTION/EJECT CANOPY IND (70S1)	OLD6	HAL553	NAVAIR-01- FI4AAA-2-2- 6 FIG. 2	553
554	LAMP DRIVER	V = +28VDC	CANOPY LIGHTS - P/O PILOT & NFO CAUTION/ADVISORY IND (69A1, 69A2)				CBL3 (36A2) OXY/BINGO CAUTION PILOT OXY PRESS. SW (41S1) NFO OXY PRESS. SW (41S2) CBL34 (36A2) CAN/LAD/CAUTION EJECT CANOPY IND	OLD7	DUL554	NAVAIR-01- FI4AAA-2-2-2 FIG. 5	554
555	LAMP DRIVER	V = +28VDC	OXY LOW P/O PILOT & NFO CAUTION/ADVISORY IND (69A1, 69A2)				CBL3 (36A2) OXY/BINGO CAUTION PILOT OXY PRESS. SW (41S1) NFO OXY PRESS. SW (41S2) CBL34 (36A2) CAN/LAD/CAUTION EJECT CANOPY IND	OLD8	WHL555	NAVAIR-01- FI4AAA-2-2-2 FIG. 2	555
556	LAMP DRIVER	V = +28VDC	LAUNDER LIGHT P/O PILOT PANEL (69A1)				CBL34 (36A2) CAN/LAD/CAUTION EJECT CANOPY IND	OLD9	DUL556	NAVAIR-01- FI4AAA-2-2-3 FIG. 2	556
557	LAMP DRIVER	V = +28VDC	COOLING A/C - LIGHT P/O NFO PANEL (69A2)				P/O K2 OVERHEAT RELAY COOLING EFFECT COM- TROLLER (44A1) CBL0 (36A4) ELEC COOL- ING K30 P/O RORH (772A1)	OLD90	HNLS57	INSPD FIG. 32 ZONE 36A, 37 35A	557
558	LAMP DRIVER	V = +28VDC	ROR EN LAMP P/O NFO PANEL (69A2)				K30 P/O RORH (772A1)	OLD51	SVL558	INSPD FIG. 46 ZONE 16B NAVAIR-01- FI4AAA-2-2- 16A	558

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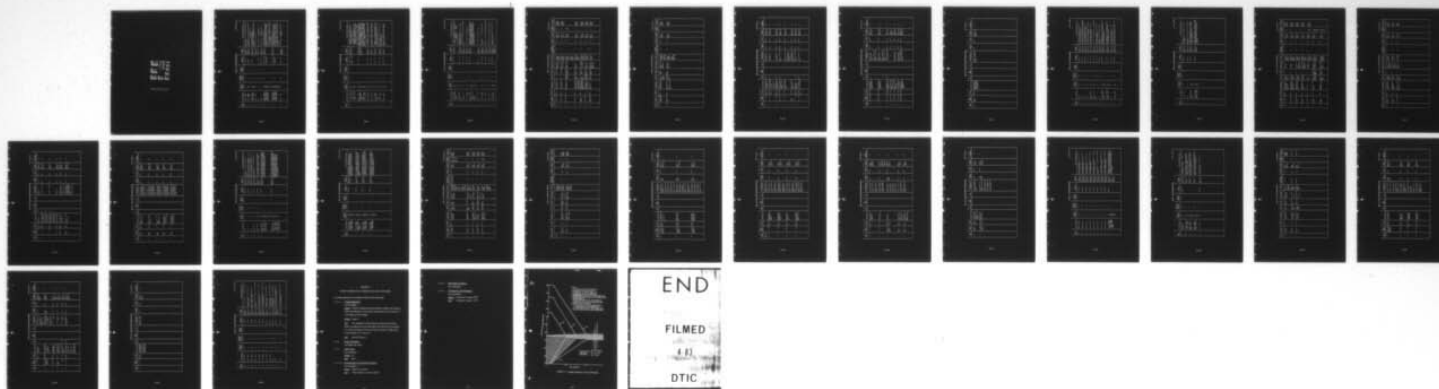
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TABLE III P-1A POSTAL BOOLEAN EQUATIONS

1	2	3	4	5	6	7	8
Table Item #	Boolean Equation	Transducer List Cross Reference	Solid State Controller List Cross Reference	Bus/Load Management Priority	Special Considerations	Reference Drawings	Equation Description & Notes
529	$VAL529 = DUL529$	N/A	529	2	ESS. NO. 2 BUS	INSTD FIG. 46 ZONE 3A, 2A	CONTROL POWER - ON = PILOT CAUTION/ADVISORY CONTROL POWER - NOT ON
530	$DUL530 = LRS506$ • LRS505	505 506	530	3	R. MAIN BUS	INSTD FIG. 46 ZONE 3B, 2B	PILOTS CAUTION ADVISORY INDICATOR DIM SIGNAL-ON = WHITE FLOOD-OFF AND INSTRUMENT N3 - ON
531	$DUL531 = LRS500$ • (LRS501 • LRS502)	500 501 502	531	3	R. MAIN BUS	INSTD FIG. 46 ZONE 1A, 13A, 2B	WFO CAUTION ADVISORY INDICATOR DIM SIGNAL - ON = INSTRUMENT LITTING N1 - ON AND WHITE FLOOD - DIM NOT AND WHITE FLOOD - NOT NOT
532	$DUL532 = DUS518$	518	532	2		INSTD FIG. 46 ZONE 13C, 2B	LIGHTS TEST - ON = IND LT - ON
535	KAL535	NA	535	2	ESS. NO. 2 BUS	INSTD FIG. 4	LEFT AICS 25VDC - ON = 25VDC ESSENTIAL NO. 2 BUS - ON
536	KAL536	NA	536	1	ESS. NO. 2 BUS	INSTD FIG. 4 ZONE 13C, 1B	RIGHT AICS 25VDC - ON = 25VDC ESSENTIAL NO. 2 BUS - ON
539	$DUL539 = [(KCS521 + KCS522 + KCS118) \cdot (GRS052 + KAS519)]$ • (KCS118 + KCS523) • (BRS015 + DRS579)	015 052 118 519 521 522 523 579	539	1	a) ESS. NO. 1 BUS b) R59 IS A TIME DELAY RELAY	INSTD FIG. 4 ZONE 2A, 23A	RIGHT MAPS CAUTION LIGHT - ON = ((FIRST R COMP SW - NOT STOW OR SECOND R COMP SW - NOT STOW OR R DIFFUSER MAP SW - NOT STOW) AND (MAIN LANDING GEAR HANDLE - DOWN OR R AUTO/STOW - STOW)) OR ((R. DIFFUSER MAP SW - NOT STOW OR FIRST R TRAIL SW - NOT TRAIL) AND (R-AICS RETRACTIONS - NOT ON OR R-AICS - 25VDC NOT))
540	$DUL540 = [(KCS524 + KCS525 + KCS112) \cdot (GRS052 + KAS540)]$ • (KCS112 + KCS526) • (BRS505 + DRS501)	052 112 505 524 525 526 501	540	2	a) ESS. NO. 1 - BUS b) R56 IS A TIME DELAY RELAY	INSTD FIG. 4 ZONE 2A, 23C	LEFT MAPS CAUTION LIGHT - ON = ((FIRST L COMP SW - NOT STOW OR SECOND L COMP SW - NOT STOW OR L DIFFUSER MAP SW - NOT STOW) AND (LGS HANDLE - DOWN OR L AUTO/STOW - STOW)) OR ((L DIFFUSER MAP SW - NOT STOW OR FIRST L TRAIL SW - NOT TRAIL) AND (L-AICS RETRACTIONS - NOT ON OR L-AICS - 25VDC NOT))
541	$DUL541 = CUS527$	527	541		ESS. NO. 2 BUS	INSTD FIG. 2 ZONE 1C, 22A, 23A, 34B	EXTENT ENGAGED - ON = KING SHEEP EXTENT SWITCH - ENGAGED

TABLE III. P-14 SUSTAIN BOLAN EQUATIONS

1	2	3	4	5	6	7	8
Table Item #	Boolean Equation	Transducer List Cross Reference	Solid State Controller List Cross Reference	Bus/Load Management Priority	Special Considerations	Reference Drawings	Equation Description & Notes
542	a) $CHL542 = CR5027 \bullet$ $\bullet (CR5002 \bullet CR5102)$ b) $CHL542 = CR5030 \bullet$ $\bullet CR5027 \bullet CR5002 \bullet$ $CR5102$	002 102 027 027 030 002 102	542	2	a) ESS, NO. 2 BUS b) M66 IS A LATCHING RELAY	INSTR FIG. 2 ZONE 43C, 43A, 36C, 36B, 1C	a) RIGHT AND LEFT WING SEAL DUMP VALVES - SET (DEENERGIZED) - WING SNEEP HANDLE - RAISED 2.5 INCHES AND L AND R MUG W/M. b) RIGHT AND LEFT WING SEAL DUMP VALVES - RESET (DEENERGIZED) - WING SNEEP HANDLE FOR SM - LOWERED AND LEFT AND RIGHT MUG - WEIGHT ON WHEELS
543	$DUL543 = (CR5027 \bullet CR5002 \bullet CR5102) \bullet$ $\bullet (CR5002 \bullet CR5102) \bullet$ $CR5026 \bullet (CR5027 \bullet$ $CR5030) \bullet$ $\bullet CR5027 \bullet CR5030 \bullet$ $\bullet (CR5026 \bullet CR5027) \bullet$ $\bullet (CR5027 \bullet CR5030) \bullet$	002 026 027 027 029 030 102 528 529	543	2	ESS, NO. 2 BUS	INSTR FIG. 2A ZONE 36B, 37B, 36C, 36B, 36A 38C, 43C, 43A 20B, 1C	AC TAIL AUTH LIGHT - ON - (HORIZ TAIL RESTRICTED AUTHORITY - RESTRICTED OR APT STICK AUTHORITY - RESTRICTED AUTHORITY) AND NOT ON (HORIZ TAIL AUTH STOP SM - OPEN AND WING SNEEP HANDLE - RAISED 2.5 INCHES OR WING SNEEP HANDLE - < 65°) OR [WING SNEEP HANDLE - NOT RAISED 2.5 INCHES AND WING SNEEP HANDLE - < 65°] OR (LEFT AND RIGHT WING SEAL DUMP VALVES - OPEN AND (WING SNEEP HANDLE - RAISED 2.5 INCHES OR < 65°))
544	$POL544 = PR5530 \bullet$ $\bullet PR5532 \bullet PR5536$	530 532 532 536	544	2	ESS, NO. 2 BUS	INSTR FIG. 43 ZONE 7B, 6A	AC MAIN POWER - ON - R. GEN. CONTROL SM - NORM AND R. GEN. COUPL PWR - ON AND R. RECTIFIER PWR - ON
545	$POL545 = PR5531 \bullet$ $PR5532 \bullet PR5536$	531 532 532 536	545	2	ESS, NO. 2 BUS	INSTR FIG. 43 ZONE 6A	R. TEST RELAY - ENERGIZED - R. GEN. CONTROL SM - TEST AND R. GEN. COUPL PWR - ON AND R. RECTIFIER PWR - ON
546	$DUL546 = XA5003 \bullet$ $(PR5531 \bullet PR5532 \bullet$ $\bullet PR5536)$	003 531 532 532 536	546	2	ESS, NO. 2 BUS	INSTR FIG. 43 ZONE 7A, 7B	R. GEN. LAMP - ON - MAC MAIN PWR CONTACTOR - NOT ON LINE AND (A. GEN. CONTROL SM - NOT ON TEST OR R. GEN. COUPL PWR - OFF OR R. RECTIFIER PWR - OFF) AND 20 VDC ESS NO. 2 BUS - ON
547	$PG547 = PR5533 \bullet$ $PR5535 \bullet PR5537$	533 535 535 537	547	2	ESS, NO. 2 BUS	INSTR FIG. 43 ZONE 6B, 6C	AC L MAIN POWER - ON - L. GEN. CONTROL SM - NORM AND L. GEN. COUPL PWR - ON
548	$POL548 = PR5534 \bullet$ $PR5535 \bullet PR5537$	534 535 535 537	548	2	ESS, NO. 2 BUS	INSTR FIG. 43 ZONE 6C	L. TEST RELAY - ENERGIZED - L. GEN. CONTROL SM - TEST AND L. GEN. COUPL PWR - ON AND L. RECTIFIER PWR - ON

TABLE III F-14 SATEL BOOLEAN EQUATIONS

1 Table Item #	2 Boolean Equation	3 Transducer List Cross Reference	4 Solid State Controller List Cross Reference	5 Bus/Load Management Priority	6 Special Considerations	7 Reference Drawings	8 Question Description & Notes
549	$DIL549 = XAS001$ $\bullet (FOS534 + FOS535$ $+ FOS537)$	004 534 535 537	549	2	ESS. NO. 2 BUS	INSTR FIG. 43 ZONE 7B, 6C	L. GEN LAMP - ON = L. AC MAIN PWR CONTACTOR - BUT ON 11.0E AND (L. GEN CONTROL SM - NOT ON TEST OR L. GEN CONT PWR - OFF OR L. RECTIFIER PWR - OFF) AND 20VDC ESS NO. 2 BUS - ON
550	$DIL550 = FAS538 +$ $FAS539$	538 539	550	2	ESS. NO. 2 BUS	INSTR FIG. 43 ZONE 12A, 11C 10B, 10A	TRANS/RECT LAMP - ON = LEFT OR RIGHT TRANSFORMER/RECTIFIER - OFF AND 20VDC ESS NO. 2 BUS - ON
551	$RFA441 = EFS940$ $+ EFS941$	540 541	551	2	ESS. NO. 2 BUS	NAVAIR 01 - F1A-AAA-2-2-6 FIG. 2	OIL PRESS - ON = LEFT OR RIGHT ENGINE OIL PRESSURE - LOW
552	$DIL552 = GDS002 \bullet$ $GDS102$	002 102	552	2	ESS. NO. 2 BUS	INSTR FIG. 46 ZONE 11A	LAUNCH BAR LAMP - ON = L. AND R. MLO - W/M
553	$DIL553 = HGS006$ $\bullet (KES131 + KES133 +$ $KES135)$ $\bullet (KES132 + KES134 +$ $KES136)$ $+ DUS943$	006 131 132 133 134 135 136 543	553	2	ESS. NO. 2 BUS	NAVAIR 01 - F1A-AAA-2-2-6 FIG. 2	INLET ICE LAMP - ON = ENGINE/POWERS ANTI-ICE SM - ONLINE AND (LEFT ENGINE - CHASE ON L. ENGINE AUTO CUTOFF) AND (RIGHT ENGINE - CHASE ON R. ENGINE AUTO CUTOFF) AND (RIGHT ENGINE - CHASE ON R. ENGINE AUTO CUTOFF) OR ICE PHONE - ON
554	$DIL554 = DUS944$	544	554	2	ACTS BUS	NAVAIR 01 - F1A-AAA-2-2-2 FIG. 5	CANOPY LIGHT - ON = CANOPY SM - OPEN
555	$WBS555 = WBS945 +$ $WBS946$	545 546	555	2	ESS. NO. 2 BUS	NAVAIR 01 - F1A-AAA-2-2-2 FIG. 2	KEY LOW LIGHT - ON = PILOT OR WFO OXY PRESS. SM - LOW
556	$DIL556 = DUS947$	547	556	2	ESS. NO. 2 BUS	NAVAIR 01 - F1A-AAA-2-2-3 FIG. 2	LASSER LIGHT - ON = BOARDING LASSER WARNING SWITCH - ON
557	$HBS557 = HBS948$	548	557	3	L. MAIN BUS	INSTR FIG. 32 ZONE 36A, 35A	COOLING AIR LIGHT - ON = COOLING AIR - OVERHEAT
558	$SUS558 = SUS949 +$ $GDS002 \bullet GDS102$	549 002 102	558	2	ESS. NO. 2 BUS	INSTR FIG. 46 ZONE 16B NAVAIR 01 - F1A-AAA-2-2-16A FIG. 5	RED EX LAMP - ON = RADAR TEST EM-RADIATE & SCAN AND L. AND R. MLO W/M

TABLE I. P-14 SOSTEL SIGNAL TRANSDUCERS

1 Table Item #	2 Signal Name/Function	3 Identifier Code	4 Signal Source Bus Identification	5 Point of Origin	6 Transducer Type	7 Present Signal Characteristics	8 Associated Loads	9 Conventional Switches Being Replaced or Deleted	10 Operational Address	11 Reference Drawings	12 Associated Boolean Equation	13 Conditioning Technique
700	LEFT-TOOL IN	TEST00	LEFT LOAD SAFETY SWITCH (2-53)	PS770	LIMIT SWITCH	TOOL IN-OPEN TOOL IN - SM 28VDC	LEFT SE- QUENCER SWITCH (2-531)	N/A	0041	INSPD FIG. 1A ZONE 42A	708	RESISTOR DIVIDER ADAPTER
701	RIGHT-TOOL IN	TEST01	RIGHT LOAD SAFETY SWITCH (2-53)	PS770	LIMIT SWITCH	TOOL IN - OPEN TOOL IN - SM 28VDC	RIGHT SE- QUENCER SWITCH (2-532)	N/A	0741	INSPD FIG. 1A ZONE 42C	709	RESISTOR DIVIDER ADAPTER
702	ALE-29-SELECTED	TEST02	SYS TEST/SYS-IMR PANEL (790A1)	NFO LEFT KNEE PANEL EL PS300	10 POSITION ROTARY - PUSH TEST	ALE-29 - SM. 28 ALE-25 - OPEN	LEFT SE- QUENCER SWITCH (2-531)		03P35	INSPD FIG. 1A ZONE 41A	708 709 715	
703	ALQ-100-NO GO	TEST03	ALQ-100 RECEIVER- TRANSMITTER (2343) (ALQ-100 RECEIVER- TRANSMITTER STATUS)	RIGHT SIDE PS300 W1140	LAMP DRIVER SIGNAL	GRD - NO GO OPEN - TO	RIGHT SE- QUENCER SWITCH (2-532)	N/A	07D34	INSPD FIG. 1A ZONE 33A	711	EXTERNAL SIGNAL ADAPTER
704	STANDBY- INDICATION	TEST04	ALQ-100 RECEIVER- TRANSMITTER (2343) - STANDBY INDICATION STATUS	RIGHT SIDE PS300 W1140	LAMP DRIVER SIGNAL	GRD - STANDBY OPEN - STANDBY	DECM COM- TREL PANEL (2342) STANDBY LITE	N/A	07D35	INSPD FIG. 1A ZONE 33A	711	EXTERNAL SIGNAL ADAPTER
705	LAMP TEST-GRD	LCST05	NFO CAUTION-ADVIS- ORY INDICATOR (66A2A1) LAMP TEST CND	NFO RIGHT KNEE PANEL PS300	LAMP DRIVER SIGNAL	TEST - GRD TEST - OPEN	DECM PANEL (2342) STANDBY LITE	N/A	07D36	INSPD FIG. 1A ZONE 28C	711	EXTERNAL SIGNAL ADAPTER
706	MISSILE-ALERT/ LAUNCH	TEST06	APR27 RECEIVER (2246)	LEFT SIDE PS375	RELAY DRIVER SIGNAL	ALERT/LAUNCH - GRD ALERT/LAUNCH - OPEN	DECM COM- TREL PANEL (2342)	N/A	03P36	INSPD FIG. 1A ZONE 23A	712	EXTERNAL SIGNAL ADAPTER

FIGURE 1A SHEET 1



FIGURE 1A, SHEET 2

TABLE I. F-14 SUBTEL SIGNAL TRANSDUCERS

1 Table Item #	2 Signal Name/Function	3 Identifier Code	4 Signal Source Box Identification	5 Point of Origin	6 Transducer Type	7 Present Signal Characteristics	8 Associated Loads	9 Conventional Switches Being Replaced or Deleted	10 Operational Address	11 Reference Drawings	12 Associated Boolean Equation	13 Conditioning Technique
707	PILOT DISPENSE COMMAND-ENABLE	TEST07	CHAFF/FLARE DIS- PENSE PANEL (25A2)	NFO RIGHT SIDE CONSOLE FS300	ENABLE SIGNAL	ENABLE-SWITCHED 25VDC ENABLE-OPEN	CHAFF/FLARE DISPENSE PANEL (25A2) (RIGHT DIS- PENSE CMD)	N/A	07D37	INCFO FIG. 1A ZONE 37B	714	EXTERNAL SIGNAL ADAPTER
708	REPEAT MODE - SELECT	TEST08	DECK CONTROL PANEL (23A2) REPEAT MODE SELECT CMD	NFO RIGHT SIDE COM- SOLE FS300	ENABLE SIGNAL	SELECT-GND SELECT-OPEN	ALQ-100 RECEIVER- TRANSMITTER (23A3) RECEIVE (REPEAT/ TEST) MODE SELECT GND)	N/A	07D38	INCFO FIG. 1A ZONE 39C	715	EXTERNAL SIGNAL ADAPTER

TABLE II. E-3A SOLID STATE POWER CONTROLLERS AND DRIVERS

1	2	3	4	5	6	7	8	9	10	11	12
Table Item #	Type of Power Controller	Rating V & I	Associated Loads	Duty Cycle	Load Power Dissipation	P.C. Location	Conventional Devices Being Replaced	Operational Address	Identifier Code	Reference Drawings	Associated Boolean Equations
700	AC - 1 POLE	V=115VAC IA I=10A	ALQ-100 RECEIVER-TRANSMITTER (23A3) (115VAC 6A)	100%			CR67 (10A) ALQ-100 PH. A (35A1)	05Q11	TEL700	INSFD FIG. 2A ZONE 1A, 3A,B	700
701	AC - 1 POLE	V=115VAC IB I=10A	1) ALQ-100 RECEIVER-TRANSMITTER (23A3) (115VAC 6A) 2) ALQ-100 RF SWITCH (23A1)	100%			CR64 (10A) ALQ-100 PH. B (35A1)	05Q12	TEL701	INSFD FIG. 1A ZONE 1A, 3A,B	701
702	AC - 1 POLE	V=115VAC IC I=10A	ALQ-100 RECEIVER-TRANSMITTER (23A3) (115VAC 6C)	100%			CR61 (10A) ALQ-100 PH. C (35A1)	05Q13	TEL702	INSFD FIG. 1A ZONE 1A, 3A,B	702
703	RELAY DRIVER	V = 28VDC	INITIATOR, DESTRUCT-IGNITER (23A1) (IDI) (28VDC SAFE ENABLE)	100%			CR60 (7.5A) ECM DESTR (36A1)	06Q13	TEL703	INSFD FIG. 1A ZONE 1C, 35B	703
704	DC - 1 POLE	V=28VDC	INITIATOR DESTRUCT-IGNITER (23A1) (IDI) (28VDC)				CR60 (7.5A) ECM DESTR (36A1) F/O KEO MEG SAFETY M (LEFT GLOW RELAY BOX 773A1)	05Q15	TEL704	INSFD FIG. 1A ZONE 1C, 35B	704
705	ENABLE SIGNAL	OPEN/CND	INITIATOR -DESTRUCT-IGNITER (23A1) (IDI)				F/O KEO MEG SAFETY M (LEFT GLOW RELAY BOX 773A1)	06Q14	TEL705	INSFD FIG. 1A ZONE 1C, 3A,C	705
706	AC - 1 POLE	V=115VAC IB I=3A	INTERFERENCE BLANKER (27A1) (115VAC 6B)	100%			CR67 (3A) INTER BLANKER (35A1)	01Q16	TEL706	INSFD FIG. 1A ZONE 2C, 10A	706
707	AC - 1 POLE	V=115VAC IB I=3A	ECM CONTROL PANEL (22A7) (115VAC 6B)	100%			CR61 (3A) AM/AFM-25 (33A5)	07Q11	TEL707	INSFD FIG. 1A ZONE 2C, 17B	707

FIGURE 1A SHEET 2

TABLE II F-14 SOLID STATE POWER CONTROLLERS AND DRIVERS

1 Table Item #	2 Type of Power Controller	3 Rating V & I	4 Associated Loads	5 Duty Cycle	6 Load Power Dissipation	7 P.C. Location	8 Conventional Devices Being Replaced	9 Operational Address	10 Identifier Code	11 Reference Drawings	12 Associated Boolean Equations
708	ENABLE SIGNAL	V = 28VDC	LEFT SEQUENCER SWITCH (25A) FIRE ENABLE/GRD TEST				CIM-3(15A) ALE-29 SEQ 1 & 2 INQUIRY (36AA) P/O K53 LANDING GEAR INTELL (RIGHT GLOVE NEAT BOX 772A1)	09Q01	TEL708	INSPD FIG. 1A 2208 3C, 39C 42A, 43A	708
709	ENABLE SIGNAL	V = 28VDC	RIGHT SEQUENCER SWITCH (25A) FIRE ENABLE/GRD TEST				CIM-3 (15A) ALE-29 SEQ 1 & 2 INQUIRY (36AA) P/O K53 LANDING GEAR INTELL (RIGHT GLOVE NEAT BOX 772A1)	10Q01	TEL 709	INSPD FIG. 1A 2208 3C, 39C 41A, 42C, 43C	709
710	DC - 1 POLE	V = 28VDC I = 5A	CHAFF/FLARE DIS- PERSE PANEL (25A2) (28VDC)	100%			CIM-4 (5A) ALE-29 CHAFF) FLARE DISP (36AA)	07Q02	TEL710	INSPD FIG. 1A 2208 3C, 37B	710
711	LAMP DRIVER	V = 28VDC	DECM CONTROL PANEL (23A2) STANDBY LITE 28VDC				N/A	03D09	TEL711	INSPD FIG. 1A 2208 29C 29C, 33A	711
712	RELAY DRIVER	V = 28VDC	DECM CONTROL PANEL (23A2) M/M SIGNAL				CIM-4 (5A) AM/ALQ-50 (AM/AFB-27) (36AA)	03D10	TEL712	INSPD FIG. 1A 2208 3C, 28A 29C	712
713	DC - 1 POLE	V = 28VDC	DECM CONTROL PANEL (23A2) (28VDC)				CIM-4 (5A) AM/ALQ-50 (AM/AFB-27) (36AA)	07Q03	TEL713	INSPD FIG. 1A 2208 3C, 17B	713
714	ENABLE SIGNAL	B = 28VDC	CHAFF/FLARE DIS- PERSE PANEL 25A2) (PILOT DISPENSE COMMAND)				P/O K50 - FLARE DOWN (RIGHT GLOVE NEAT BOX 772A1)	03D11	TEL714	INSPD FIG. 1A 2208 37A, 37B 39C, 40C	714

TABLE II. P-1A SOLID STATE POWER CONTROLLERS AND DRIVERS

1 Table Item #	2 Type of Power Controller	3 Rating V & I	4 Associated Loads	5 Duty Cycle	6 Load Power Dissipation	7 P.C. Location	8 Conventional Devices Being Replaced	9 Operational Address	10 Identifier Code	11 Reference Drawings	12 Associated Boolean Equations
715	ENABLE SIGNAL	GND/OPEN	ALQ-100 RECEIVER - TRANSMITTER (23A3) (REPEAT MODE SELECT - GND OR REPEAT GND TEST CAPABILITY)				P/O K31 - MLO SAFETY D (RIGHT GLOVE RELAY BOX 772A1)	00011	TEL-715	INSTR. FIG. 1A ZONE 33A, 31A 30A, 25C	715

TABLE III P-14 SUGTEL BOOLEAN EQUATIONS

1 Table Item #	2 Boolean Equation	3 Transducer List Cross Reference	4 Solid State Controller List Cross Reference	5 Bus/Load Management Priority	6 Special Considerations	7 Reference Drawings	8 Equation Description & Notes
700	TEL700	N/A	700	3	R. MAIN BUS	INGSD FIG. 1A ZONE 1B, 34B	ALQ-100 RECEIVER-TRANSMITTER (115VAC @A) = 115VAC @A RIGHT MAIN BUS - ENERGIZED
701	TEL701	N/A	701	3	R. MAIN BUS	INGSD FIG. 1A ZONE 1B, 34B	ALQ-100 RECEIVER-TRANSMITTER AND ALQ-100 RF SWITCH (115VAC @B) = 115VAC @B RIGHT MAIN BUS - ENERGIZED
702	TEL702	N/A	702	3	R. MAIN BUS	INGSD FIG. 1A ZONE 1C, 34B	ALQ-100 RECEIVER-TRANSMITTER (115VAC @C) = 115VAC @C RIGHT MAIN BUS - ENERGIZED
703	TEL703	N/A	703	1	ESS. NO. 1 BUS	INGSD FIG. 1A ZONE 1C, 35B	INITIATOR DESTRUCT LOBSTER (20VDC SAFE ENABLE) = 20VDC ESS NO. 1 BUS - ENERGIZED
704	TEL704 = $\overline{\text{GDS002}} + \overline{\text{GDS102}}$	042 102	704	1	ESS. NO. 1 BUS	INGSD FIG. 1A ZONE 1C, 35B	INITIATOR DESTRUCT LOBSTER (20VDC) = LEFT OR RIGHT MEG - WEIGHT OR WHEELS NOT
705	TEL705 = $\overline{\text{GDS002}} + \overline{\text{GDS102}}$	042 102	705	1	ESS. NO. 1 BUS	INGSD FIG. 1A ZONE 1C, 34C	SAFE (GND) = LEFT AND RIGHT MEG - WEIGHT OR WHEELS
706	TEL706	N/A	706	2	ESS. NO. 2 BUS	INGSD FIG. 1A ZONE 2C, 10A	INTERFERENCE BLANKER (115VAC @B) = 115VAC @B ESS. NO. 2 BUS - ENERGIZED
707	TEL707	N/A	707	3	L. MAIN BUS	INGSD FIG. 1A ZONE 2C, 17B	ION CONTROL PANEL (115VAC @B LEFT MAIN BUS - ENERGIZED
708	TEL708 = $(\overline{\text{GDS052}} + \overline{\text{TEST00}}) + (\overline{\text{TEST02}} + \overline{\text{MUS055}})$	052 055 700 702	708	3	R. MAIN BUS	INGSD FIG. 1A ZONE 3C, 39C 41A, 42A, 43A	LEFT SEQUENCE SWITCH - FIRE ENABLE OR GND TEST = MEG MAKE-UP AND LEFT - TOOL IN OR ALL-29 - SELECTED AND TEST-DEPRESSED
709	TEL709 = $(\overline{\text{GDS052}} + \overline{\text{TEST01}}) + (\overline{\text{TEST02}} + \overline{\text{MUS055}})$	052 055 701 702	709	3	R. MAIN BUS	INGSD FIG. 1A ZONE 3C, 39C 41A, 42C, 43C	RIGHT SEQUENCE SWITCH - FIRE ENABLE OR GND TEST = MEG MAKE-UP AND RIGHT - TOOL IN OR ALL-29 - SELECTED AND TEST - DEPRESSED
710	TEL710	N/A	710	3	R. MAIN BUS	INGSD FIG. 1A ZONE 3C, 37B	CHAPP/PLANE DISPERSE PANEL (20VDC) = 20VDC RIGHT MAIN BUS - ENERGIZED
711	TEL711 = $\text{TEST03} + \text{TEST04} + \text{LC705}$	703 704 705	711	3	R. MAIN BUS	INGSD FIG. 1A ZONE, 29C, 28C, 33A	FROM CONTROL PANEL - STANDBY LITE = ALQ100 - NO GO OR STANDBY-INDICATION OR LAMP TEST - GND



TABLE III F-14 SATEL BOOLEAN EQUATIONS

1 Table Item #	2 Boolean Equation	3 Transducer List Cross Reference	4 Solid State Controller List Cross Reference	5 Bus/Load Management Priority	6 Special Considerations	7 Reference Drawings	8 Equation Description & Notes
712	TEL712 = TEST06	706	712	3	L. MAIN BUS	INSFPD FIG. 1A ZONE 3C, 28A 29C	DECM CONTROL PANEL - MA/ML SIGNAL - MISSILE - ALERT/LAUNCH
713	TEL713	N/A	713	3	L. MAIN BUS	INSFPD FIG. 1A ZONE 3C, 17B	ECM CONTROL PANEL (28VDC) - 28VDC LEFT MAIN BUS - ENERGIZED
714	TEL714 = TEST07 • TMS219 • (G32217 • G32218)	217 218 219 707	714	3	R. MAIN BUS	INSFPD FIG. 1A ZONE 37A, 37B 39C, 40C	PILOT DISPENSE COMMAND (28VDC) - PILOT DISPENSE COMMAND - ENABLE AND DLC ENGAGE CHAFF DISPENSE - ON AND LEFT OR RIGHT FLAP - > 2°
715	TEL715 = TEST08 • [(G3002 • G3102) + (TEST06 • M3055)]	002 055 102 708 706	715	3	R. MAIN BUS	INSFPD FIG. 1A ZONE 33A, 31A 30A, 29C	AUG-100 RECEIVER-TRANSMITTER - RECEIVE MODE SELECT - REPEAT MODE-SELECT AND (LEFT OR RIGHT M/G - WEIGHT ON WHEELS NOT) OR (ALE-29 - SELECTED AND TEST DEPRESSED)

FIGURE 3A SHEET 1

TABLE 1. F-14 HOSTEL SIGNAL TRANSDUCERS

1 Table Item #	2 Signal Name/Function	3 Identifier Code	4 Signal Source Box Identification	5 Point of Origin	6 Transducer Type	7 Present Signal Characteristic	8 Associated Loads	9 Conventional Switches Being Replaced or Deleted	10 Operational Address	11 Reference Drawings	12 Associated Boolean Equation	13 Conditioning Technique
709	NFO ASME7 - ON	RF5709	NFO MAIN-DATA LINK CONTROL PANEL (1502) (ASME7- ON/OFF)	NFO LEFT SIDE COM- SOLE PS300	N/A	ON - GND OFF - OPEN	DATA LINK CONVERTER (13A1) (POWER ON/OFF)	N/A	05042	INSPD FIG. 3A ZONE 3B	719	EXTERNAL SIGNAL ADAPTER
710	PILOT ASME7 - ON	RF5710	PILOT MAIN-DATA LINK CONTROL PANEL (1501) (ASME7-ON/OFF)	PILOTS LEFT SIDE CONSOLE PS225	N/A	ON - GND OFF - OPEN	DATA LINK CONVERTER (13A1) (POWER ON/OFF)	N/A	05043	INSPD FIG. 3A ZONE 4B	719	EXTERNAL SIGNAL ADAPTER
711	PILOT-FORCED REPLY	RF5711	PILOT MAIN-DATA LINK CONTROL PANEL (1501)	PILOTS LEFT SIDE CONSOLE PS225	N/A	FORCED REPLY - GND FORCED REPLY - 28V/A.7E	DATA LINK CONVERTER (13A1) (FORCED REPLY)	N/A	05044	INSPD FIG. 3A ZONE 4C, 5A, 10C	721	EXTERNAL SIGNAL ADAPTER
712	NFO-FORCED REPLY	RF5712	NFO MAIN-DATA LINK CONTROL PANEL (1502)	NFO LEFT SIDE COM- SOLE PS 300	N/A	FORCED REPLY - GND FORCED REPLY - 28V/A.7E	DATA LINK CONVERTER (13A1) (FORCED REPLY)	N/A	05045	INSPD FIG. 3A ZONE 5A, 5B, 10C	721	EXTERNAL SIGNAL ADAPTER
713	CALINE-ALIGN	RF5713	CDC (07A1)	PS360 ML150	N/A	ALIGN - 28VDC ALIGN - OPEN	K33-DATA LINK B (LEFT GLOVE RELAY BOX 773A1)	N/A	07039	INSPD FIG. 3A ZONE 37C, 5A	723 725 726	EXTERNAL SIGNAL ADAPTER
714	D/L RAD- SELECTED	RF5714	MASTER TEST PANEL (73A1)	PILOTS RIGHT SIDE COM- SOLE PS225	12 POSITION ROTARY SWITCH WITH PIN FOR TEST	D/L RAD - SWITCHED 28VDC D/L RAD-OPEN	K35-DATA LINK D (LEFT GLOVE RELAY BOX 773A1)		07040	INSPD FIG. 3A ZONE 7C	720 721 722 723 724 725 726	
715	ASME7 - SELECTED	RF5715	SYS TEST - SYS PWR PANEL (790A1)	NFO LEFT KNEE PANEL PS300	10 POSITION ROTARY SWITCH	ASME7 - SWITCHED 28VDC ASME7 - OPEN	K77-DATA LINK TEST (LEFT GLOVE RELAY BOX 773A1)		09337	INSPD FIG. 3A ZONE 7C	721 722 723 724 725 726	

FIGURE 2A. SHEET 2

TABLE I. P-14 SATEL SIGNAL TRANSMITTERS

1 Table Item #	2 Signal Name/Function	3 Identifier Code	4 Signal Source Box Identification	5 Point of Origin	6 Transducer Type	7 Present Signal Characteristics	8 Associated Loads	9 Conventional Switches Being Replaced or Deleted	10 Operational Address	11 Reference Drawings	12 Associated Boolean Equation	13 Conditioning Technique
716	PILOT-CANCEL REPLY	HS716	PILOT MAIN DATA LINK CONTROL PANEL (15A1)	PILOTS LEFT SIDE CONSOLE PS225	N/A	CANCEL REPLY = GND CANCEL REPLY = 28V/A, 7K	DATA LINK CONVERTER (13A1)	N/A	OS3A-6	1WSFD FIG. 3A ZONE 4C	722	EXTERNAL SIGNAL ADAPTER
717	NFO-CANCEL REPLY	HS717	NFO MAIN DATA LINK CONTROL PANEL (15A2)	NFO LEFT SIDE CON- SOLE PS300	N/A	CANCEL REPLY = GND CANCEL REPLY = 28V/A, 7K	DATA LINK CONVERTER (13A1)	N/A	OS3A-7	1WSFD FIG. 3A ZONE 3C	722	EXTERNAL SIGNAL ADAPTER
718	MASTER-EMERG	SS718	IFF CONTROL PANEL (05A1) (MASTER SWITCH)	NFO RIGHT SIDE CON- SOLE PS300	N/A	EMERG. = GND EMERG. = OPEN	CSDC (07A1) (IFF EMERG)	N/A	OTPA1	1WSFD FIG. 3A ZONE 4GB	721	EXTERNAL SIGNAL ADAPTER

FIGURE 3A SHEET 1

TABLE II P-14 SOLID STATE POWER CONTROLLERS AND DRIVERS

1 Table Item #	2 Type of Power Controller	3 Rating V & I	4 Associated Loads	5 Duty Cycle	6 Load Power Dissipation	7 P.C. Location	8 Conventional Devices Being Replaced	9 Operational Address	10 Identifier Code	11 Reference Drawings	12 Associated Boolean Equations
716	AC - 1 POLE	V-115VAC 4A 1-3A	DDI (1342) (115VAC PH. A)	100%			CB1(3A) DDI AC (3545)	07Q07	RPL716	INSPD FIG. 3A ZONE 53A, 1A	716
717	DC - 1 POLE	V-28VDC 1-5A	a) NFO MAIN-DATA LINK LINK CONTROL PANEL (1542) (DDI-28VDC) b) PILOT MAIN-DATA LINK CONTROL PANEL (1541) (DDI-28VDC)	100%			CB1(5A) DDI DC (3644)	07Q08	RPL717	INSPD FIG. 3A ZONE 1B, 2B 4C	717
718	DC - 1 POLE	V-28VDC 1-3A	a) NFO MAIN-DATA LINK CONTROL PANEL (1542) (ASM-27 28VDC) b) PILOT MAIN-DATA LINK CONTROL PANEL (1541) (ASM-27 28VDC)	100%			CB1(3A) ASM-27 (3644)	02D20	RPL718	INSPD FIG. 3A ZONE 1A, 2B 4C	718
719	AC-1POLE	V-115VAC 4A	DATA LINK CONVERTER (1341) (115VAC 4A)	100%			CB6(5A) ASM-27 (3545)	01Q20	RPL719	INSPD FIG. 3A ZONE 2A, 3B 4B, 10A	719
720	ENABLE SIGNAL	RHD/28V - 4.7K	DATA LINK CONVERTER (1341) RADIATED TEST SELECT				P/O K35 DATA LINK D (LEFT GLOVE RELAY BOX 773A1)	0AD09	RPL720	INSPD FIG. 3A ZONE 1A, 7C 9C, 10C	720
721	ENABLE SIGNAL	GRD/28V- 4.7K	DATA LINK CONVERTER (1341) (FORCED REPLY)				CB1(3A) ASM 27 (3644) P/O K34 DATA LINK C P/O K35 DATA LINK D P/O K77 DATA LINK TEST P/O K22 MAG SAFETY H (LEFT GLOVE RELAY BOX 773A1) CB1(3A) ASM27 (3644)	0AD10	RPL721	INSPD FIG. 3A ZONE 10C, 9 7C, 4C, 3C, 1A	721

TABLE II E-14 SOLID STATE POWER CONTROLLERS AND DRIVERS

1 Table Item #	2 Type of Power Controller	3 Setting V & I	4 Associated Loads	5 Duty Cycle	6 Load Power Dissipation	7 P.C. Location	8 Conventional Devices Being Replaced	9 Operational Address	10 Identifier Code	11 Reference Drawings	12 Associated Boolean Equations
722	ENABLE SIGNAL	0V/28V- 4.7K	DATA LINK CONVERTER (13A1) (CANCEL RELAY)				P/O K34 DATA LINK C P/O K35 DATA LINK D P/O K77 DATA LINK TEST P/O K22 MEG SAFETY H (LEFT GLOVE RELAY BOX 773A1)	0AD11	RPL722	INSFD FIG. 3A ZONE 10C, 9 7C, 4C, 3C, 1A	722
723	ENABLE SIGNAL	0V/28V- 4.7K	DATA LINK CONVERTER (13A1) (UTM SELECT)				CB18(3A) AS267 (36A4) CB18(3A) AS267 (36A4) P/O K33 DATA LINK B P/O K34 DATA LINK C P/O K35 DATA LINK D P/O K77 DATA LINK TEST P/O K22 MEG SAFETY H (LEFT GLOVE RELAY BOX 773A1)	0AD12	RPL 723	INSFD FIG. 3A ZONE 37C, 10C 9, 7C, 1A	723
724	ENABLE SIGNAL	28V/OPEN	DATA LINK CONVERTER (13A1) (HARDWARE CALS SELECT)				CB18(3A) AS267 (36A4) P/O K35 DATA LINK D P/O K77 DATA LINK TEST P/O K22 MEG SAFETY H (LEFT GLOVE RELAY BOX 773A1)	0AD13	RPL724	INSFD FIG. 3A ZONE 10B, 9 7C, 1A	724
725	ENABLE SIGNAL	28V/OPEN	SHIPBOARD USQ-2B/ SSM-1C COMPUTER DATA TERMINAL (ALIGN DATA SELECT)				CB18(3A) AS267 (36A4) P/O K33 DATA LINK B P/O K35 DATA LINK D P/O K77 DATA LINK TEST P/O K22 MEG SAFETY H (LEFT GLOVE RELAY BOX 773A1)	Q2R21	RPL725	INSFD FIG. 3A ZONE 9, 7C 1A	725
726	ENABLE SIGNAL	28V/OPEN	SHIPBOARD USQ-2B/ SSM-1C COMPUTER DATA TERMINAL (WAY POINT DATA SELECT)				CB18(3A) AS267 (36A4) P/O K33 DATA LINK B P/O K35 DATA LINK D P/O K77 DATA LINK TEST P/O K22 MEG SAFETY H (LEFT GLOVE RELAY BOX 773A1)	Q2R26	RPL726	INSFD FIG. 3A ZONE 9, 7C, 1A	726



TABLE III F-14 SGGTEL BOOLEAN EQUATIONS

1 Table Item #	2 Boolean Equation	3 Transducer List Cross Reference	4 Solid State Controller List Cross Reference	5 Bus/Load Management Priority	6 Special Considerations	7 Reference Drawings	8 Equation Description & Notes
716	$RH716$	N/A	716	3	L. MAIN BUS	INSPD FIG. 3A ZONE 53A, 1A	DOI-115VAC 6A = 115VAC 6A LEFT MAIN BUS - ENERGIZED
717	$RH717$	N/A	717	3	L. MAIN BUS	INSPD FIG. 3A ZONE 1B, 2B, 4C	NFO AND PILOT'S MAIN DATA LINK CONTROL PANEL - DOI 28VDC = 28VDC LEFT MAIN BUS - ENERGIZED
718	$RI718$	N/A	718	3	L. MAIN BUS	INSPD FIG. 3A ZONE 1A, 2B, 4C	NFO AND PILOT'S MAIN DATA LINK CONTROL PANEL - ASM-27 28VDC = 28VDC LEFT MAIN BUS - ENERGIZED
719	$RI719 = RPS709 +$ $RI710$	709 710	719	3	L. MAIN BUS	INSPD FIG. 3A ZONE 1A, 3B, 4B 10A	DATA LINK CONVERTER - 115VAC 6A = NFO OR PILOT ASM27 FWR - ON
720	$RI720 = RPS714 \bullet$ $MUS666$	068 714	720	3	L. MAIN BUS	INSPD FIG. 3A ZONE 2A, 7C 9C, 10C	DATA LINK CONVERTER - RADIATED TEST SELECTED (OND) = D/L RAD-SELECTED AND TEST SELECTOR - DEPRESSSED
721	$RI721 = (RPS711 +$ $RPS712 + RPS013 +$ $SAS718) \bullet$ $[(MUS055 \bullet RAS715) +$ $(MUS068 \bullet RPS714) +$ $(MUS068 \bullet RPS714) +$ $(RPS002 \bullet RPS102)]$	002 013 055 068 102 711 712 714 715 716	721	3	L. MAIN BUS	INSPD FIG. 3A ZONE 10C, 9, 7C, 4C, 3C, 1A	DATA LINK CONVERTER - FORCED REPLY (OND) = (PILOT OR NFO) - FORCED REPLY OR PILOT EJECT - EJECT OR MASTER - ENRG) AND [(TEST-DEPRESSSED AND ASM27 - SELECTED) OR (TEST SELECTOR-DEPRESSSED AND D/L RAD - SELECTED) OR (LEFT OR RIGHT M/G - WEIGHT NOT ON WHEELS))
722	$RI722 =$ $[(RPS716 \bullet RPS717) \bullet$ $[(MUS055 \bullet RPS715) \bullet$ $(MUS068 \bullet RPS714) \bullet$ $(RPS002 \bullet RPS102)] +$ $[(MUS055 \bullet RPS715) \bullet$ $(MUS068 \bullet RPS714) \bullet$ $(RPS002 \bullet RPS102)]$	002 055 068 702 714 715 716 717	722	3	L. MAIN BUS	INSPD FIG. 3A ZONE 10C, 9, 7C, 4C, 3C, 1A	DATA LINK CONVERTER - CANCEL REPLY (OND) = [(PILOT OR NFO - CANCEL REPLY) AND [(TEST-DEPRESSSED AND ASM27 - SELECTED) OR (TEST SELECTOR-DEPRESSSED AND D/L RAD - SELECTED) OR (LEFT OR RIGHT M/G - WEIGHT NOT ON WHEELS))] OR [(TEST-NOT DEPRESSSED OR ASM27 - NOT SELECTED) AND (TEST SELECTOR - NOT DEPRESSSED OR D/L RAD - NOT SELECTED) AND (LEFT AND RIGHT M/G - WEIGHT ON WHEELS)]

TABLE III P-14 SOSTEL BOOLEAN EQUATIONS

1 Table Item #	2 Boolean Equation	3 Transducer List Cross Reference	4 Solid State Controller List Cross Reference	5 Bus/Load Management Priority	6 Special Considerations	7 Reference Drawings	8 Equation Description & Notes
723	$RPL723 = RPS713 \bullet$ $[(NUS055 + RPS715)$ $\bullet (NUS068 + RPS714)$ $\bullet (GUS002 \bullet GUS102)]$	002 055 068 102 713 714 715	723	3	L. MAIN BUS	INSPD FIG. 3A ZONE 37C, 10B 9, 7C, 1A	DATA LINK CONVERTER - UTM SELECT (GND) - CAINS - ALIGN AND ((TEST - NOT DEPRESSED OR ASK27 - NOT SELECTED) AND (TEST SELECTOR - NOT DEPRESSED OR D/L RAD - NOT SELECTED) AND (LEFT AND RIGHT MEG - WEIGHT ON WHEELS))
724	$RPL724 = (NUS055 +$ $RPS715) \bullet (NUS068$ $+ RPS714) \bullet (GUS002$ $\bullet GUS102)$	002 055 068 102 714 715	724	3	L. MAIN BUS	INSPD FIG. 3A ZONE 10B, 9, 7C 1A	DATA LINK CONVERTER - HARDLINE CAINS SELECT (20VDC) - (TEST - NOT DEPRESSED OR ASK27 - NOT SELECTED) AND (TEST SELECTOR - NOT DEPRESSED OR D/L RAD - NOT SELECTED) AND (LEFT AND RIGHT MEG - WEIGHT ON WHEELS)
725	$RPL725 = RPS713 \bullet$ $(NUS055 + RPS715)$ $\bullet (NUS068 + RPS714)$ $\bullet (GUS002 \bullet GUS102)$	002 055 068 102 713 714 715	725	3	L. MAIN BUS	INSPD FIG. 3A ZONE 37C, 10A 9, 7C, 1A	SHIPBOARD USQ-26/SSM-1C COMPUTER DATA TERMINAL - ALIGN DATA SELECT - CAINS - ALIGN AND (TEST - NOT DEPRESSED OR ASK27 - NOT SELECTED) AND (TEST SELECTOR - NOT DEPRESSED OR D/L RAD - NOT SELECTED) AND (LEFT AND RIGHT MEG - WEIGHT ON WHEELS)
726	$RPL726 = RPS713$ $+ (NUS055 \bullet RPS715)$ $+ (NUS068 \bullet RPS714)$ $+ (GUS002 \bullet GUS102)$	002 055 068 102 713 714 715	726	3	L. MAIN BUS	INSPD FIG. 3A ZONE 3A, 10A, 9 7C, 1A	SHIPBOARD USQ-26/SSM-1C COMPUTER DATA TERMINAL - MAYPOINT DATA SELECT - CAINS - ALIGN NOT OR (TEST - DEPRESSED AND ASK27 - SELECTED) OR (TEST SELECTOR - NOT DEPRESSED OR D/L RAD - NOT SELECTED) OR (LEFT OR RIGHT MEG - WEIGHT ON WHEELS NOT)

FIGURE 1A SHEET 1

TABLE 1 P-14 SIGTEL SIGNAL TRANSDUCERS

1 Table Item #	2 Signal Name/Function	3 Identifier Code	4 Signal Source Box Identification	5 Point of Origin	6 Transducer Type	7 Present Signal Characteristics	8 Associated Loads	9 Conventional Switches Being Replaced or Deleted	10 Operational Address	11 Reference Drawings	12 Associated Boolean Equation	13 Conditioning Technique
719	WCS-STBY/QUIT ON SELECT	TBS719	P/O HAND CONTROL (27A20) (56) (WCS SWITCH)	NFO CENTER CONSOLE FS300	RELAY DRIVER SIGNAL	STBY/QUIT ON SELECT = SWITCHED 28V OFF = OPEN	K1 CONTROL AND DISPLAY POWER RELAY (INS RELAY ASSEMBLY 27A35) K52 AMO3 POWER K51 AMO3 POWER (RIGHT GLOVE RELAY BOX 772A1)	HAND CONTROL (27A20) (560) (WCS SWITCH)	07D42	INSFD FIG. 1A ZONE 17C	733 727 734 728 741 729 742 730 743 731 744 732 745	EXTERNAL SIGNAL ADAPTER
721	OIL FLOW > 1.0 GPM	TBS721	RADAR TRANSMITTER (27A8) 011	STAR- BOARD FS210	FLOW SWITCH	> 1.0 GPM = SWITCHED 28VDC < 1.0 GPM = OPEN	K2 SOLENOID FMR (FORWARD RELAY BOX 761A1)	N/A	01P59	INSFD FIG. 1A ZONE 73B	270	RESISTOR DIVIDER ADAPTER
722	HYDRAULICS - ON	TBS722	REGULATED POWER SUPPLY (27A24A4) (610) (HYDRAULICS - ON)	STARBOARD FS390	ENABLE SIGNAL	ON = 28VDC OFF = OPEN/UND OPEN	27K1 RADAR ANTENNA RE- LAY	N/A	07D43	INSFD FIG. 1A ZONE 71B	736	EXTERNAL SIGNAL ADAPTER
723	THERMAL SWITCH - CLOSED	TBS723	RADAR ANTENNA (27A2) (031)	FORWARD FS160	TEMPERATURE SWITCH	CLOSED-SWITCHED 28VDC OPEN = "OPEN"	27K1 RADAR ANTENNA RELAY	N/A	01P60	INSFD FIG. 1A ZONE 65C	736	RESISTOR DIVIDER ADAPTER
724	WCS 28VDC - EXT	TBS724	REGULATED POWER SUPPLY (27A24A4) (610) (WCS 28VDC EXT)	STARBOARD FS390	ENABLE SIGNAL	EXT = 28VDC EXT = OPEN	a) REGULAT- ED FMR SUPPLY (27A24 A4) b) RADAR TEST ENABLE CONTROL PANEL (27A37)	N/A	07D44	INSFD FIG. 1A ZONE 70A	737 738 739	EXTERNAL SIGNAL ADAPTER

TABLE I. P-14 SCOTEL SIGNAL TRANSDUCERS

FIGURE 1A SHEET 2

1 Table Item #	2 Signal Name/Function	3 Identifier Code	4 Signal Source Box Identification	5 Point of Origin	6 Transducer Type	7 Present Signal Characteristics	8 Associated Loads	9 Conventional Switches Being Replaced or Deleted	10 Operational Address	11 Reference Drawings	12 Associated Boolean Equation	13 Conditioning Technique
724 (Cont'd)							c) RFR ENABLE P/O INFO CAUTION ADVISORY INDICATOR					
726	RADAR TEST ENABLE-SCAN ONLY	TBS726	RADAR TEST ENABLE CONTROL PANEL (27A37)	STARBOARD PS215	TOGGLE/RELAY DRIVEN SWITCH	SCAN ONLY = SWITCHED 28VDC OFF = OPEN	REGULATED PWR SUPPLY (27A24A)	N/A	OTD*5	INSTD FIG. 1A ZONE 69B	739	EXTERNAL SIGNAL ADAPTER
727	DC REG ON - ENABLE	TBS727	REGULATED PWR SUPPLY (27A24A) (610) (DC REG ON ENABLE)	STARBOARD PS390	RELAY DRIVE SIGNAL	ENABLE = 28VDC ENABLE = OPEN	K50-SMUL- REGULATED PWR SUP (RIGHT GLOVE RELAY BOX 772A1)	N/A	OTD*6	INSTD FIG. 1A ZONE 71C	740	EXTERNAL SIGNAL ADAPTER



FIGURE 1A. SHEET 1

TABLE II. P-14 SOLID STATE POWER CONTROLLERS AND DRIVERS

1 Table Item #	2 Type of Power Controller	3 Rating V & I	4 Associated Loads	5 Duty Cycle	6 Load Power Dissipation	7 P.C. Location	8 Conventional Devices Being Replaced	9 Operational Address	10 Identifier Code	11 Reference Drawings	12 Associated Boolean Equations
727	AC - 3 POLE (CAN BE 3 SINGLE POLE DEVICES)	W-115VAC #A, B, C I = 3A	a) COMPUTER ADDRESS (27A18) (505) b) DDD (27A17) (541)				K1 - CONTROL AND DIS- PLAY POWER (FMS RELAY ASSEMBLY 27A36) CBE1 (3A) CONTR/DISPLAY PH C (35A5) CBE3/3A CONTR/DISPLAY PH B (35A5) CBE4 (3A) CONTR/DISPLAY PH A (35A5) CBL3 (5A) AMCS ENABLE (36A)	07Q09 07Q10 07Q11	TEL 727	INSRD FIG. 1A ZONE 1A, 2A 17B, 17C, 21A	727
728	AC - 3 POLE (CAN BE 3 SINGLE POLE DEVICES)	W-115VAC #A, B, C I = 5A	POWER SUPPLY/BULK STORER (27A23A) (4G2)				CBE6(5A) AM/MC-9 COMPR PH. C (35A5) CBE7(5A) AM/MC-9 COMPR PH. B (35A5) CBE8(5A) AM/MC-9 COMPR PH. A (35A5) CBL3(5A) AMCS ENABLE (36A)	09Q08 09Q09 09Q10	TEL 728	INSRD FIG. 1A ZONE 1A, 2A 17C, 41B, 42B	728
729	AC - 3 POLE (CAN BE 3 SINGLE POLE DEVICES)	W-115VAC #A, B, C I = 5A	REGULATED POWER SUPPLY (27A24A) (610) #A, B, C (STANDARD PS375)				K52 AMC-9 POWER (RIGHT GLOVE RELAY BOX 772A1) CB54 (7.5A) 28VDC PWR SUP PH. A (35A5) CB51 (7.5A) 28VDC PWR SUP PH. B (35A5) CB48 (7.5A) 28VDC PWR SUP PH. C (35A5) CBL3 (5A) AMCS ENABLE (36A)	09Q31 09Q32 09Q33	TEL 729	INSRD FIG. 1A ZONE 1B, 17C 69A, 70A	729



TABLE II F-14 SOLID STATE POWER CONTROLLERS AND DRIVERS

1 Table Item #	2 Type of Power Controller	3 Rating V & I	4 Associated Loads	5 Duty Cycle	6 Load Power Dissipation	7 P.C. Location	8 Conventional Devices Being Replaced	9 Operational Address	10 Identifier Code	11 Reference Drawings	12 Associated Boolean Equations
729 (Continued)											
730	AC - 1 POLE	V=115VAC I <sub>pk</sub>	RADAR ANTENNA (27A2) (031) (HEAT- SINK AND ETI) (FS100)				P/O K51 AMC-9 FMR (RIGHT GLOVE RELAY BOX 772A1) CB94 (7.5A) 28VDC FMR SUP. PH. A (35A5) CB13 (5A) AMCS ENABLE (36A4)	0A001	TBL730	IMSFD FIG. 4A ZONE 1B, 2A 17C, 69A, 69C	730
731	AC - 1 POLE	V=115VAC I <sub>pk</sub>	BEAM POWER SUPPLY (27A13) (014) (FMR SUP) (PORT FS150)				P/O K51 AMC-9 FMR (RIGHT GLOVE RELAY BOX 772A1) CB94 (7.5A) 28VDC FMR SUP. PH. A (35A5) CB13 (5A) AMCS ENABLE (36A4)	01Q13	TBL731	IMSFD FIG. 4A ZONE 1B, 2A 17C, 69A, 76B	731
732	ETI DRIVER	V=115VAC I <sub>pk</sub>	LPRP PROCESSOR (27A25A2) (083) (ETI)				P/O K51 AMC-9 FMR (RIGHT GLOVE RELAY BOX 772A1) CB94 (7.5A) 28VDC FMR SUP. PH. A (35A5) CB13 (5A) AMCS ENABLE (36A4)	01Q25	DTL732	IMSFD FIG. 4A ZONE 1B, 2A 17C, 69A, 76B	732
733	AC - 1 POLE	V=115VAC I <sub>pk</sub>	RADAR TRANSMITTER (27A5) (011) ETI AND GRID MODU- LATOR				P/O K51 AMC-9 FMR (RIGHT GLOVE RELAY BOX 772A1) CB91 (7.5A) 28VDC FMR SUP. PH. B (35A5) CB13 (5A) AMCS ENABLE (36A4)	0A002	TBL733	IMSFD FIG. 4A ZONE 1B, 2A 17C, 69A, 73C	733

FIGURE 1A, SHEET 3

TABLE II. P-1A SOLID STATE POWER CONTROLLERS AND DRIVERS

1 Table Item #	2 Type of Power Controller	3 Rating V & I	4 Associated Loads	5 Duty Cycle	6 Load Power Dissipation	7 P.C. Location	8 Conventional Devices Being Replaced	9 Operational Address	10 Identifier Code	11 Reference Drawings	12 Associated Boolean Equations
734	AC - 1 POLE	V=115VAC I = 10A	NADAR SYNCHRONIZER (277A1) (010) (REGULATOR AND FILTERS)				CB48 (7.5A) 28VDC PWR SUP. PH. C (35A5) CB13 (5A) AMCS ENABLE (36A4) P/O K51 AMG-9 PWR (RIGHT GLOVE RELAY BOX 772A1)	04Q03	TBL734	INSPD FIG. 1A ZONE 1B, 2A 17C, 69A 77B	734
735	DC - 1 POLE	V=28VDC	NADAR RECEIVER (277A2) (022) 28VDC				CB48 (5A) NADAR SUB- SYSTEM NO. 1 (36A4) P/O K2 ORC TEST RELAY (PMS RELAY ASSEMBLY 27A38)	04Q04	TBL735	INSPD FIG. 4A ZONE 2B, 71C INSPD FIG. 35 ZONE 8C, 4C 3B, 2B, 1A	735
736	AC-3 POLE (CAN BE 3 SINGLE POLE DEVICES)	V=115VAC I <sub>A</sub> , I <sub>B</sub> , I <sub>C</sub> I = 20A EACH	NADAR ANTENNA (277A2) (031)				CB26 (20A) ANT SVD HYD PH. A (35A5) CB27 (20A) ANT SVD HYD PH. B (35A5) CB26 (20A) ANT SVD HYD PH. C (35A5) 27K1 NADAR ANTENNA RELAY	04Q05 04Q06 04Q07	TBL736	INSPD FIG. 4A ZONE 65C, 21B, 1C	736
737	ENABLE DRIVER	28VDC/ OPEN	REGULATED POWER SUPPLY (27A3A4) (010) (WEIGHT OFF MAIN WHEEL SIGNAL)				P/O K30 - M/G SAF "P" P/O K94 - AMG 9 SAF (RIGHT GLOVE RELAY BOX 772A1)	06B25	TBL737	INSPD FIG. 1A ZONE 69B	737
738	ENABLE DRIVER	28VDC/ OPEN	REGULATED POWER SUPPLY (27A3A4) (010) (MAIN WHEEL INTLK BYPASS 28VDC SIGNAL)				P/O K30-M/G SAF "P" (RIGHT GLOVE RELAY BOX 772A1)	06B26	TBL738	INSPD FIG. 1A ZONE 70B	738

TABLE II. P-14 SOLID STATE POWER CONTROLLERS AND DRIVERS

1 Table Item #	2 Type of Power Controller	3 Rating V & I	4 Associated Loads	5 Duty Cycle	6 Load Power Dissipation	7 P.C. Location	8 Conventional Devices Being Replaced	9 Operational Address	10 Identifier Code	11 Reference Drawings	12 Associated Boolean Equations
739	ENABLE DRIVER	28VDC/ OPEN	REGULATED POWER SUPPLY (27A24A4) (GLO) (ANTENNA TEST 28VDC SIGNAL)				P/O K50 - MLO SAMP "p" (RIGHT GLOVE RELAY BOX 772A1)	06027	TBL739	1WSFD FIG. 4A ZONE	739
740	AC - 3POLE (CAN BE 3 POWER SUPPLY SINGLE POLE DEVICES)	V = 115VAC 4A, B, C 1-10A EACH	SEMI-REGULATED POWER SUPPLY (27A24A5) (601)				K50 SEMI-RELTD PWR SUP (RIGHT GLOVE RELAY BOX 772A1) CB30 (10A) SEM REG PWR SUP PH. C (35A5) CB31 (10A) SEM REG PWR SUP PH. B (35A5) CB33 (10A) SEM REG PWR SUP PH. A (35A5)	05Q34 05Q35 05Q36	TBL740	1WSFD FIG. 4A ZONE 2B, 71C, 81C	740

TABLE III F-14 SUSTEL BOOLEAN EQUATIONS

1 Table Item #	2 Boolean Equation	3 Transducer List Cross Reference	4 Solid State Controller List Cross Reference	5 Bus/Load Management Priority	6 Special Considerations	7 Reference Drawings	8 Equation Description & Notes
727	TBL727 = TBS719	719	727	3	L. MAIN BUS	INSD PIG. 1A ZONE 1A, 2A, 17B, 17C, 21A	COMPUTER ADDRESS AND DDD - 115VAC 6A, B & C = MCS - STBY/DMIT ON SELECT
728	TBL728 = TBS719	719	728	3	L. MAIN BUS	INSD PIG. 1A ZONE 1A, 2A, 17C, 11B, 12B	POWER SUPPLY/BULK STORER - 115VAC 6A, B & C = MCS - STBY/DMIT ON SELECT
729	TBL729 = TBS719	719	729	3	L. MAIN BUS	INSD PIG. 1A ZONE 1B, 17C, 69A, 70A	REGULATED POWER SUPPLY - 115VAC 6A, B & C = MCS - STBY/DMIT ON SELECT
730	TBL730 = TBS719	719	730	3	L. MAIN BUS	INSD PIG. 1A ZONE 1B, 2A, 17C, 69A, 65C	RADAR ANTENNA - (HEATER AND ETI) - 115VAC 6A = MCS - STBY/DMIT ON SELECT
731	TBL731 = TBS719	719	731	3	L. MAIN BUS	INSD PIG. 1A ZONE 1B, 2A, 17C, 69A, 76B	BEAM POWER SUPPLY - (POWER SUPPLY) - 115VAC 6A = MCS - STBY/DMIT ON SELECT
732	DTL732 = TBS719	719	732	3	L. MAIN BUS	INSD PIG. 1A ZONE 1B, 2A, 17C, 69A, 78B	LPRF PROCESSOR - ETI - 115VAC 6A = MCS - STBY/DMIT ON SELECT
733	TBL733 = TBS719	719	733	3	L. MAIN BUS	INSD PIG. 1A ZONE 1B, 2A, 17C, 69A, 73C	RADAR TRANSMITTER - (ETI AND GRID MODULATOR) 115VAC 6B = MCS - STBY/DMIT ON SELECT
734	TBL734 = TBS719	719	734	3	L. MAIN BUS	INSD PIG. 1A ZONE 1B, 2A, 17C, 69A, 77B	RADAR SYNCHRONIZER - (MODULATOR AND FILTERS) 115VAC 6C = MCS - STBY/DMIT ON SELECT
735	TBL735 = [DIE032 • DIE031 • ZAG765 • (ZAS003 • YAS004)] • (DAS002 • GDS102 • HNS127)	002 003 004 031 032 102 127 180	735	3	AWG-9 BUS	INSD PIG. 1A ZONE 2B, 71C 70C, 2A  INSD PIG. 35 ZONE 8C, 4C, 3B, 2B, 1A	RADAR RECEIVER - 28VDC = (PIGHT AND COMBINED PRESSURE - < 2100 PSI AND EXTERNAL AC PWR - NOT ON LINE AND RIGHT ON LEFT MAIN AC PWR - ON LINE) OR (LEFT AND RIGHT N/G - WEIGHT ON WHEELS AND GND CLG - ORG/CABIN)



TABLE III F-14 SUSTEL BOOLEAN EQUATIONS

1 Table Item #	2 Boolean Equation	3 Transducer List Cross Reference	4 Solid State Controller List Cross Reference	5 Bus/Load Management Priority	6 Special Considerations	7 Reference Drawings	8 Equation Description & Notes
736	TL736 = TBS722 • TBS723	722 723	736	3	L. MAIN BUS	INSFD FIG. 1A ZONE 69C, 71B, 1C	RADAR ANTENNA - 115VAC 6A, B, C = HYDRAULICS - ON AND THERMAL SWITCH - CLOSED
737	TL737 = TBS724 • (GBS002 • GBS102)	002 102 724	737			INSFD FIG. 1A ZONE 69B	REGULATED POWER SUPPLY - WEIGHT OFF MAIN WHEEL SIGNAL - (28VDC) = WCS 28VDC-EXT AND LEFT OR RIGHT MLC WEIGHT NOT ON WHEELS
738	TL738 = GBS002 • GBS102 • SVS549 • TBS724	002 102 549 724	738			INSFD FIG. 1A ZONE 69B	MAIN WHEEL INTLK BYPASS (28VDC) = LEFT AND RIGHT MLC - WEIGHT ON WHEELS AND MAIN TEST ENABLE - RADIATE AND SCAN AND WTS 28VDC-EXT
739	TL739 = (TBS724 • GBS002 • GBS102) • (SVS549 • TBS726)	002 102 724 549 726	739			INSFD FIG. 1A ZONE 69B	ANTENNA TEST (28VDC) = WCS 28VDC EXT AND LEFT AND RIGHT MLC - WEIGHT ON WHEELS AND RADIATE TEST ENABLE - RADIATE AND SCAN OR SCAN ONLY
740	TL740 = TBS727	727	740	3	L. MAIN BUS	INSFD FIG. 1A ZONE 2B, 71C, 81C	SEMI REGULATED PWR SUP - 115VAC 6A, B, C = DC REG. ON - ENABLE



FIGURE 5A SHEET 1

TABLE I. F-14 SCOTCH SIGNAL TRANSDUCERS

1 Table Item #	2 Signal Name/Function	3 Identifier Code	4 Signal Source Box Identification	5 Point of Origin	6 Transducer Type	7 Present Signal Characteristics	8 Associated Loads	9 Conventional Switches Being Replaced or Deleted	10 Operational Address	11 Reference Drawings	12 Associated Boolean Equation	13 Conditioning Technique
720	IR COOLING - INTERLOCK	TH720	INFRARED AMPLIFIER (27422) (120)	PORT FWD PSE05	RELAY DRIVER SIGNAL	COOLING-28VDC COOLING-OPEN	K1-IR/TV RELAY P/O FORWARD RELAY BOX (761A1)	N/A	05048	INSPD FIG. 5A ZONE 231C	746	EXTERNAL SIGNAL ADAPTER
726	IR/TV ON - SELECT	TH726	P/O HAND CONTROL (27420) (560) IR/TV SWITCH	NFO CEN- TER CON- SOLE PS300	11PT TOGGLE SWITCH	ON - SWITCHED 28VDC OFF - OPEN	INFRARED AMPLIFIER (27422) (120)	IR/TV SWITCH	05026	INSPD FIG. 5A ZONE 3A	747	SOLID STATE
729	IR/TV STBY - SELECT	TH729	P/O HAND CONTROL (27420) (560) IR/TV SWITCH	NFO CEN- TER CON- SOLE PS 300	11PT TOGGLE SWITCH	STBY - SWITCHED 28VDC OFF - OPEN	INFRARED AMPLIFIER (27422) (120)	IR/TV SWITCH	05027	INSPD FIG. 5A ZONE 3A	748	SOLID STATE

FIGURE 2A SHEET 1

TABLE II. E-14 SOLID STATE POWER CONTROLLERS AND DRIVERS

1 Table Item #	2 Type of Power Controller	3 Rating V & I	4 Associated Loads	5 Duty Cycle	6 Load Power Dissipation	7 P.C. Location	8 Conventional Devices Being Replaced	9 Operational Address	10 Identifier Code	11 Reference Drawings	12 Associated Boolean Equations
7/1	AC - 3 POLE (CAM BE 3 SINGLE POLE DEVICES)	V-115VAC 6A, B, C	TID (27A16) (590) (115VAC 6A, B, C)				CIEA (3A) CONTR/DISPLAY PH. A CIEB (3A) CONTR/DISPLAY PH. B CIEC (3A) CONTR/DISPLAY PH. C (35A5)	03Q02 03Q03 03Q04	AGL741	INSPD FIG. 5A ZONE 1A, 5A 4A, 261C	741
7/2	ETI DRIVER	V-115VAC 6A	SENSOR CONTROL PANEL (27A19) (501) (ETI)				P/O PMS RELAY ASSEMB. (27A38) KI CONTRL & DISPLAY PWR CIEA (3A) CONTR/DIS- PLAY PH. A (35A5) P/O KI CONTRL & DIS- PLAY PWR (PMS RELAY ASSEMB. (27A38))	03Q05	DTL742	INSPD FIG. 5A ZONE 1A, 4A 5A, 41B	742
7/3	AC - 1 POLE	V-115VAC 6A	MISSION RECORDER (27A15A) (590) (CAMERA MOTOR)				CIEA/3A) CONTR/DISPLAY PH. A (35A5) P/O KI CONTRL & DISPLAY PWR (PMS RELAY ASSEMB. 27A38)	03Q06	SIL743	INSPD FIG. 5A ZONE 1A, 4A 5A, 273A	743
7/4	ETI DRIVER	V-115VAC 6A	DOPPLER PROCESSOR (27A25A3) (039) (ETI METER)				CIEA (3A) CONTR/DIS- PLAY PH. A (35A5) P/O KI CONTRL & DIS- PLAY PWR (PMS RELAY ASSEMB. (27A38))	01Q26	DTL744	INSPD FIG. 5A 1B, 4A, 6B 168C	744

FIGURE 5A, SHEET 2

TABLE II. E-14 SOLID STATE POWER CONTROLLERS AND DRIVERS

1 Table Item #	2 Type of Power Controller	3 Rating V & I	4 Associated Loads	5 Duty Cycle	6 Load Power Dissipation	7 P.C. Location	8 Conventional Devices Being Replaced	9 Operational Address	10 Identifier Code	11 Reference Drawings	12 Associated Boolean Equations
745	ETI DRIVER	V=115VAC IA	DOPPLER FILTER (27A25A) (0A2A & 0A2B)				CB54 (3A) CONTR (DISPLAY PH. A (35A5)) P/O K1 CONTR. & DISPLAY PHR (PHS RELAY ASSRHB 27A3H)	01Q27	DTL745	INSPD FIG. 5A ZONE 1A, 1A 68, 156C, 156C	745
746	AC - 3 POLE (CAN BE 3 SINGLE POLE CONTROLLERS)	V=115VAC IA, IB, IC	a) INFRARED AMPLI- FIER (27A22) (120) b) INFRARED RE- CEIVER (27A21) (101)				CB18 (3A) IR/TV PH. A CB17 (3A) IR/TV PH. B CB15 (3A) IR/TV PH. C (35A5) K1 IR/TV RELAY P/O FORWARD RELAY BOX (701A1)	01Q03 01Q04 01Q05	THE746	INSPD FIG. 5A ZONE 1C, 217B, 231C	746
747	ENABLE DRIVER	V=28VDC	INFRARED AMPLIFIER (27A22) (120) (IR/TV ON SELECT)				CB51 (5A) IR/SUBSTS (36A1)	04D01	THE747	INSPD FIG. 5A ZONE 1C, 3A 217B	747
748	ENABLE DRIVER	V=28VDC	INFRARED AMPLIFIER (27A22) (120) (IR/TV STBY SELECT)				CB51 (5A) IR/SUBSTS (36A1)	04D02	THE748	INSPD FIG. 5A ZONE 1C, 3A 217B	748
749	DC - 1 POLE	V=28VDC	INFRARED AMPLIFIER (27A22) (120) 28VDC	100%			CB51 (5A) IR/SUBSTS (36A1)	01Q06	THE749	INSPD FIG. 5A ZONE 1C, 217C	749
750	DC - 1 POLE	V=28VDC I=5A	a) P/O HAND COM- TROL (27A20) (560) b) DDD (27A 17) (5A1) c) TID (27A16) (580) d) MISSION REORDER (27A15A) (590)	100%			CB50 (5A) CONTR/DISPL SUBSTS (36A1)	03Q07	THE750	INSPD FIG. 5A ZONE 1C, 38B 141A, 261B 273A	750

TABLE II. F-14 SOLID STATE POWER CONTROLLERS AND DRIVERS

1 Table Item #	2 Type of Power Controller	3 Rating V & I	4 Associated Loads	5 Duty Cycle	6 Load Power Dissipation	7 P.C. Location	8 Conventional Devices Being Replaced	9 Operational Address	10 Identifier Code	11 Reference Drawings	12 Associated Boolean Equations
751	DC - 1 POLE	V=28VDC I=7.5A	a) RADAR SYNCHRON- IZER (27A14) (010) (28VDC RADAR NO. 2) b) P/O RADAR AN- TENNA (27A2) (031) (28VDC RADAR NO. 2)				CBA-7 (7.5A) RADAR SUBSYS NO. 2 (36A4)	04Q06	TB-751	INSFD FIG. 5A ZONE 2A, 123C	751



TABLE III F-14 SOTEL BOOLEAN EQUATIONS

FIGURE 5A SHEET 1

1 Table Item #	2 Boolean Equation	3 Transducer List Cross Reference	4 Solid State Controller List Cross Reference	5 Bus/Load Management Priority	6 Special Considerations	7 Reference Drawings	8 Equation Description & Notes
741	AGL741 = TBS719	719	741	3	L. MAIN BUS	INSPD FIG. 5A ZONE 1A, 5A 4A, 261C	TID (115VAC 6A, B, C) = MCS - STBY/DMIT ON SELECT
742	DTL742 = TBS719	719	742	3	L. MAIN BUS	INSPD FIG. 5A ZONE 1A, 4A, 5A, 41B	SENSOR CONTROL PANEL - (TID 115VAC 6A) = MCS - STBY/DMIT ON SELECT
743	SRL743 = TBS719	719	743	3	L. MAIN BUS	INSPD FIG. 5A ZONE 1A, 4A, 5A 273A	MISSION RECORDER - (CAMERA MOTOR 119VAC) = MCS - STBY/DMIT ON SELECT
744	DTL744 = TBS719	719	744	3	L. MAIN BUS	INSPD FIG. 5A ZONE 1A, 4A, 6A, 148C	DOPPLER PROCESSOR - (RTI 115VAC) = MCS - STBY/DMIT ON SELECT
745	DTL745 = TBS719	719	745	3	L. MAIN BUS	INSPD FIG. 5A ZONE 1A, 4A, 6B 156C, 159C	DOPPLER FILTERS (042A & 042B) - (RTI - 115VAC) = MCS-STBY/DMIT ON SELECT
746	TRL746 = TBS720	720	746	3	L. MAIN BUS	INSPD FIG. 5A ZONE 1C, 217B 231C	INFRARED RECEIVER AND AMPLIFIER - (115VAC 6A, B, C) = 1A COOLING INTERLOCK
747	TRL747 = TBS728	728	747	3	AMC-9 BUS	INSPD FIG. 5A ZONE 1C, 3A 217B	INFRARED AMPLIFIER - (18/TV ON SELECT 28VDC) = 18/TV ON - SELECT
748	TRL748 = TBS729	729	748	3	AMC-9 BUS	INSPD FIG. 5A	INFRARED AMPLIFIER - (18/TV STBY SELECT 28VDC) = 18/TV STBY - SELECT
749	TRL749	N/A	749	3	AMC-9 BUS	INSPD FIG. 5A ZONE 1C, 217C	INFRARED AMPLIFIER - 28VDC = 28VDC RIGHT MAIN BUS - ENERGIZED
750	TRL750	N/A	750	3	AMC-9 BUS	INSPD FIG. 5A ZONE 1C, 30B 141B, 261B, 273A	HAND CONTROL, DED, TID AND MISSION RECORDER - (28VDC) = AMC-9 DC BUS - ENERGIZED
751	TRL751	N/A	751	3	AMC-9 BUS	INSPD FIG. 5A ZONE 2A, 123C	RAIAR SYNCHRONIZER AND RADAR ANTENNA - (28VDC) = AMC-9 DC BUS-ENERGIZED



## Appendix C

### BENDIX CORPORATION COMMENTS TO MIL-E-23001A(AS)

All subparagraphs are acceptable except for the following:

3.3.1.1 Voltage Regulation

Not acceptable.

Delete: "And for unbalanced loads within the rating of the system, where the difference in per phase load currents do not exceed 1/3 of the phase current rating."

Delete: Figure 1

Add: For unbalanced loads within the rating of the system, where the difference in per unit phase load current do not exceed 1/3 of the rated phase current, the line to neutral voltage shall remain within 115.0 volts  $\pm 3\%$ .

Add: Revised Figure 1.

3.3.2 Output Frequency

Acceptable any class.

3.3.9 Radio Noise

Not acceptable.

Delete: ID

Add: III B

3.4.1.13 Potentiometer and Adjustable Resistor

Not acceptable.

Delete: "Shall not be used"

Add: "Shall conform to MIL-R-22097"

3.4.2.7 Input Shaft Disconnect

Not acceptable.

4.5.14 Performance and Endurance

Not Acceptable.

Delete: "Generator coolant 120°C"

Add: "Generator coolant 85°C"

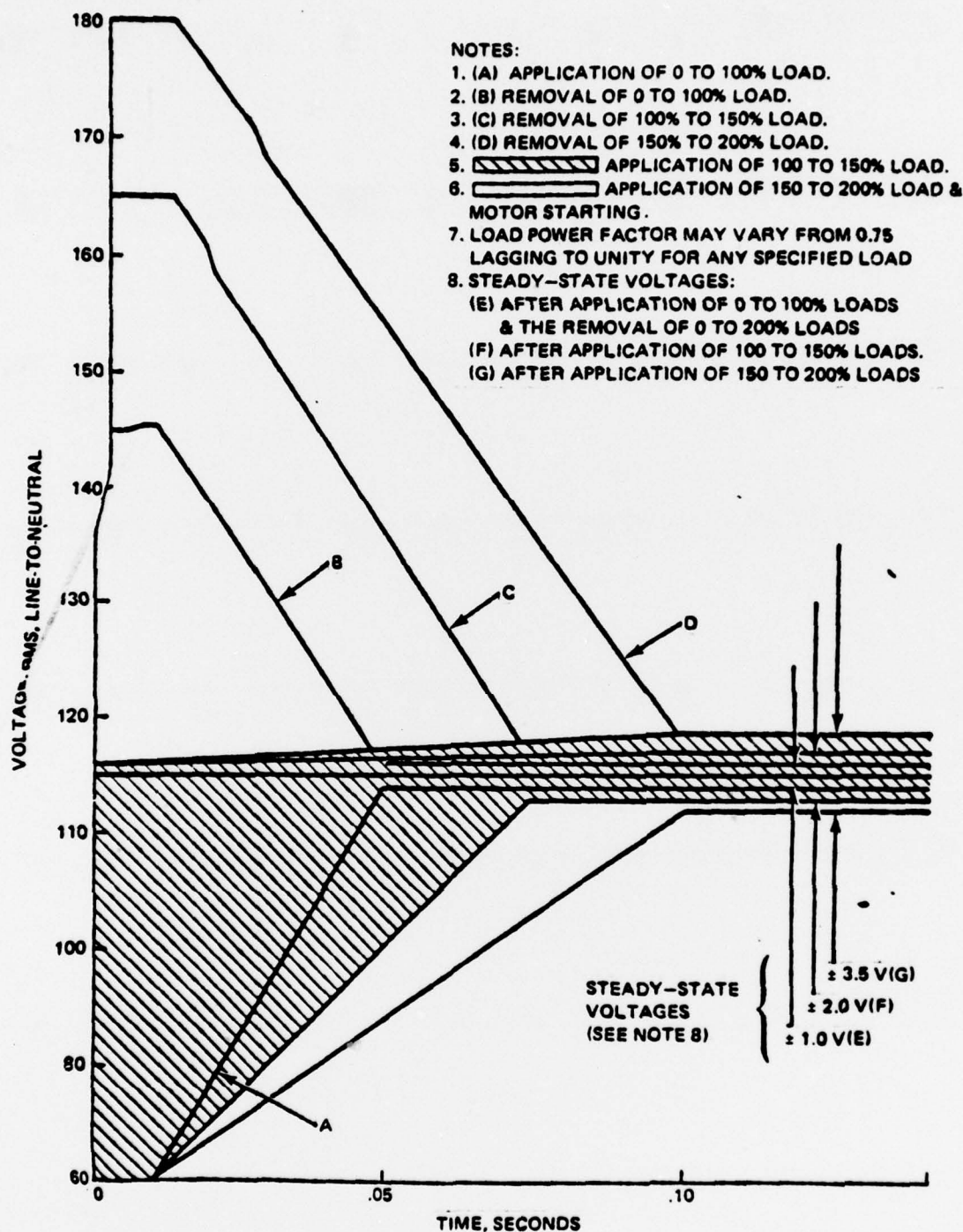


Figure C-1 Voltage Transient Limits (Revised)

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